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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of Petition for Review by the City of Morgan Hill of Cleanup and Abatement Order No. R3-2007-0077	**PETITION FOR REVIEW** **[Filed concurrently with City of Morgan Hill's Lodgment of Transcript of Hearing on December 7, 2007 and Request to Present Supplemental Evidence and for Hearing to Consider Supplemental Evidence]**

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Proof of Service

The City of Morgan Hill (City) hereby files this petition for review by the State Water Resources Control Board (SWRCB) for the grounds set forth below. This petition for review is filed pursuant to Water Code §13320 and 23 CCR §§2050, et seq.

Petitioner: City of Morgan Hill, 17555 Peak Avenue, Morgan Hill, CA 95037.

Specific action and inaction of the Regional Water Quality Control Board Central Coast Region (RWQCB):

1. The RWQCB failed to issue a Cleanup and Abatement Order (CAO) that provided for replacement water for the City's Tennant Avenue Well. (Tennant Well)

2. The RWQCB refused to issue a CAO, or take any other actions available to it, to require Olin Corporation (Olin) to protect the Tennant Well from contamination emanating from Olin's facility located at 425 Tennant Avenue, Morgan Hill, California (Site); and failed to take action on its own to make the determination as to whether or not the Tennant Well could be used for remediation of the Llagas Subbasin.

3. The RWQCB issued CAO R3-2007-0077 on December 14, 2007 (December CAO) [Petition Exhibit 1] which improperly relies on Monitored Attenuation (MA) as a default remediation mechanism for areas other than Area 1, Zones A and B.

4. The RWQCB issued the December CAO which failed to provide for a cleanup level consistent with background.

The date of the RWQCB's action and refusal to act:

December 7, 2007 and December 14, 2007.

Statement of reasons the RWQCB's acts/failures to act were inappropriate and/or improper:

1. The RWQCB failed to issue a CAO that provided for replacement water for the City's Tennant Well in violation of Water Code § 13304(a) and (f)

2. The RWQCB refused to issue a CAO, or take any other actions available to it, to require Olin to protect the Tennant Well from contamination emanating from the Olin Site; and failed to take action on its own to make the determination as to whether or not the Tennant Well could be used for remediation of the Subbasin in violation of Water Code §§ 13301, 13304(a) and (f), 13360, and the State Water Resources Control Board (SWRCB) Policies 68-16 and 92-49.

3. The RWQCB issued the December CAO which improperly relies on MA as a default remediation mechanism for areas other than Area 1, Zones A and B in violation of Water Code §§ 13301, 13304(a), 13360, and the SWRCB Policies 68-16 and 92-49.

4. The RWQCB issued the December CAO and failed to provide for a cleanup level consistent with background in violation of Water Code §§ 13301, 13304(a), 13360 and the

SWRCB Policies 68-16 and 92-49.

The manner in which the City is aggrieved:

The City is a public water supplier which owns and operates, amongst others, the Tennant Well that is part of the City's multi-well water supply system. Because of the level of perchlorate in that well, the City, at great expense and effort, has installed and operated an Ion Exchange (IX) system to remove Olin's perchlorate so that the water can be served to the public. The City needs the water from the Tennant Well to meet current and immediate future water demand and the City has attempted three times to find additional water so as to avoid operating the Tennant Well by drilling other wells but has been unsuccessful in finding more water. The IX unit and its operational cost should be the subject of a water replacement CAO requiring Olin to shoulder the financial responsibility as opposed to the rate payers in the City. Further, it has been clearly demonstrated that the operation of the IX system at the Tennant Well has removed over 60 pounds of perchlorate from the Subbasin and should be made part of the remediation plans for the Subbasin at the expense of Olin.

The Subbasin is the only source of water for the City and many of the City's other wells are also contaminated by perchlorate above background. At the present time, the RWQCB has indicated that it considers background to be 1.4ppb, but it has not issued a CAO that requires remediation to background. In fact, the only requirement now established for Olin is to cleanup a small portion of the Subbasin to 6ppb. As such, the Subbasin area from which the City draws its water, previously determined by the RWQCB to be a source of high quality water, is significantly degraded and will remain so for decades to come because of the failures of the RWQCB to act as required.

The RWQCB is employing MA in lieu of active remediation in the vast greater portion of the Subbasin, including the entirety of the Subbasin that underlies the City and from which the City draws its water. The use of MA is without support factually, scientifically and legally.

The Specific Action by the SWRCB that the City Requests:

1. Order the RWQCB to require Olin to provide replacement water for the Tennant Well to the City under Water Code §13304.

2. Order the RWQCB to require Olin to take all reasonable steps to protect the Tennant Well from being impacted by the contamination Olin discharged into the groundwater.

3. Order the RWQCB to require Olin to employ the Tennant Well as part of the remediation of Area 1.

4. Order the RWQCB to require Olin to remediate the Subbasin to background, and to rescind any directive to Olin that permits a cleanup to 6ppb anywhere in the Subbasin.

5. Order the RWQCB to rescind any part of the December CAO that permits Monitored Attenuation.

6. Order the RWQCB to take any and all other actions consistent with the SWRCB ruling and findings in this matter as may be necessary.

Statement of points and authorities

See attached.

A list of any persons other than the City and the discharger known by the regional board to have an interest in the subject matter of the petition:

Santa Clara Valley Water District
City of Gilroy
County of Santa Clara
Assemblyman John Laird
Senator Abel Maldonado
Perchlorate Working Group
Perchlorate Community Action Group
Andrea Ventura for Clean Water Action

A statement that the petition has been sent to the appropriate regional board and to the discharger

The petition has been sent to the RWQCB with courtesy copies to others. See proof of service.

STATEMENT OF POINTS AND AUTHORITIES

1. Significant Questions Raised by this Petition

This Petition raises several significant questions of law and policy which must be determined by the State Water Resources Control Board (SWRCB). They are:

- What is the scope of Water Code §13304 and the level of authority of the RWQCB in issuing a water replacement order under Water Code §13304?

- What is the scope of authority of the RWQCB in providing for a PRP to protect a drinking water well and drinking water source under Water Code §13360?

- What is the scope of authority of the RWQCB to require a PRP to take specific actions regarding remediation and when must it step in and perform the evaluation itself?

- Can the RWQCB approve a cleanup level higher than background even though the prerequisites for approving such an action have not been met?

- Can the RWQCB approve the use of MA even though the prerequisites for its use have not been met?

- Can the RWQCB approve the use of MA even though the requirements it claims it is relying on can not be met?

The City believes the answers to these questions are clear and must be answered as follows:

- The RWQCB has the authority and duty to order a PRP to supply replacement water if the public water supplier's later system demands require it, despite the fact that the PRP replaced one impacted well voluntarily without order from the RWQCB.

- The RWQCB has the authority and duty to order a PRP to protect a drinking water well and its drinking water source under Water Code §13360.

- The RWQCB may require a PRP to take specific actions regarding remediation, and if the PRP does not perform the necessary investigation, the RWQCB must do so.

- The RWQCB can not approve a cleanup level higher than background when the prerequisites for approving such an action have not been met.

- The RWQCB can not approve the use of MA when the prerequisites for its use have not been met.

- The RWQCB can not approve the use of MA when the requirements it claims it is relying on can not be met.

It is highly unfortunate that the City finds itself in the position of having to raise these questions via this Petition, but it must as the RWQCB:

- Has failed to take certain actions or has taken other actions that are not in the public interest,

- Has acted in violation of, and/or failed to act in a manner in accord with, applicable law, rules and regulations and

- Has failed to comply with the overarching mandate of the Porter-Cologne Water Quality Control Act and both the SWRCB's and RWQCB's basic mission.

The City submits that the SWRCB must act promptly and decisively to right these wrongs by:

► Ordering the RWQCB to require Olin to provide replacement water for the Tennant Well to the City under Water Code §13304.

► Ordering the RWQCB to require Olin to take all reasonable steps to protect the Tennant Well from being impacted by the contamination Olin discharged into the groundwater.

► Ordering the RWQCB to require Olin to employ the Tennant Well as part of the remediation of Area 1.

► Ordering the RWQCB to require Olin to remediate the Subbasin to background, and to rescind any directive to Olin that permits a cleanup to 6ppb anywhere in the Subbasin.

► Ordering the RWQCB to rescind any part of the December CAO that permits Monitored Attenuation.

► Ordering the RWQCB to take any and all other actions consistent with the SWRCB ruling and findings in this matter as may be necessary.

2. The RWQCB's Mission

(a) Porter-Cologne Water Quality Control Act

The State Legislature declared upon the passage of the Porter-Cologne Water Quality Control Act:

> The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state. The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible. Water Code §13000.

(b) Mission Statement

The SWRCB and its Nine Regional Boards have a common mission.[1] That mission is:

> to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

(c) The RWQCB's Own Interpretation of its Mission Statement

As further noted by Executive Officer Roger Briggs at the Hearing of December 7, 2007 (December Hearing):

> Additionally, we're not just looking at the current uses of the groundwater. Our charge is to look at the groundwater as a resource as a whole, and so the goal is cleanup of the basin as a whole, not just meeting drinking water standards for existing uses. (Transcript, Page 89, Lines 3-7)

The City, by this Petition, seeks to have the SRWCB fulfill both its Legislative mandate and its own mission statement.

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[1] http://www.swrcb.ca.gov/

3. The RWQCB has Abandoned its Mission

The Staff Report for the December Hearing claims that the approach to the remediation of the 10-mile long perchlorate plume emanating from the Site is a "conservative" one.

> The Proposed CAO takes a very conservative approach towards groundwater cleanup because we are responsible for providing adequate and appropriate protection of the public's drinking water supply. (Staff Report pg. 5)

> Water Board staff believe that it is necessary and appropriate to be conservative in our groundwater cleanup requirements, particularly for those areas where a public drinking water supply is affected, threatened and will remain at risk for an extended period of time. (Staff Report pg. 6)

When the phrase "conservative" is used in this manner, it is usually meant to convey that the actions taken are beyond those minimally necessary, "just in case." However, as stated herein, there is very little that can be found in the December CAO that evidences such care.

This lack of a "conservative" approach is evident when one reads the rationale set forth in the Staff Report and the Staff's Response to Comments. As such, the basis for the December CAO not only fails to carry out the SWRCB/RWQCB mandates and missions, but the lack of substantive factual, scientific and legal basis for the approach taken is arbitrary and capricious and fundamentally flawed.

Olin's ownership and operation of the Site for over more then 40 years resulted in massive discharges of perchlorate into the Subbasin. Before these discharges, the water in the Subbasin was of high quality.[2] It is clear that this high quality water has been degraded by Olin.[3] And while RWQCB recognizes that it has a level of responsibility for correcting this degradation,[4] the RWQCB's actions and failure to act appropriately as required by law and policy has failed to address the requirement of bringing the Subbasin back to the high quality that existed before Olin's discharges.

Indeed, Olin has benefited from the free storage of its waste in the Subbasin for decades and the RWQCB seems to desire to bestow further benefits to Olin by allowing it to maintain such storage for decades more to come without actively removing its waste and restoring the groundwater to background. The RWQCB's actions and inactions are only benefiting the entity that created the problem and offers the owners of the groundwater, the People of the State of California, nothing.

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[2] "In this particular case, the term 'high quality' is defined as the quality of the Llagas Subbasin groundwater prior to the discharge of perchlorate." (Response to Comments by Olin Item 3).

[3] "While we understand the detected perchlorate concentrations at many well locations are presently below the MCL, the mere presence of perchlorate in underlying groundwater indicates that the quality of groundwater has been degraded." (Response to Comments by Mr. Leekema, Item 2).

[4] "The underlying principle to remember is that it is the Water Board's mission to protect groundwater as a resource." (Response to Comments by Mr. Leekema, Item 2).

4. Background Leading up to the December Hearing and December CAO

The City is home to over 38,000 people.[5] Its Department of Public Works operates a public water supply system for the benefit of its residents and local businesses.[6] The sole supply source is the Subbasin[7] This source has been compromised by perchlorate contamination emanating from the operation of the signal flare manufacturing facility owned and operated by Olin.[8] Sadly, over the last seven years, both Olin and the RWQCB have done precious little to remove the great mass of perchlorate which has escaped to the south and northeast into the Subbasin.

Olin manufactured signal flares on the Site from approximately 1956 to 1988. From 1988 to 1995, Standard Fusee leased the buildings at the Site and also manufactured signal flares. Perchlorate, used in the manufacture of signal flares, was detected in water samples at the site in August 2000.[9] Further investigation has shown the existence of a perchlorate groundwater plume now stretching to the south 9-10 miles and to the northeast, to an as yet undetermined distance from the Site. This plume infects major portions of the Subbasin, including the area from which the City wells draw domestic water.

The RWQCB has been involved in this issue for much of the last seven years.[10] Olin started the cleanup of the Site, under the supervision of the RWQCB in December 2003.[11] The first Cleanup and Abatement Order (CAO) was issued on March 10, 2005 (2005 CAO).

A year and a half later the RWQCB issued an amendment to the 2005 CAO. Up to that time, as the record shows, Olin consistently denied any responsibility for perchlorate found in the Northeast Contamination Area.[12] The 2005 CAO was a result of the City's willingness to expend a considerable amount of money, time and effort to engage in technical and legal discussion with the RWQCB, as well as supplying technical and other information regarding the

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[5] The population of the City in 2000 was 32,000. In 2001 the population of the City was 34,600; in 2004 the population was 35,500; and currently it is 38,400. The City's Master Plan calls for further growth such that in 2010 the expected population is projected at 41,000 and in 2020 the projection is 48,000. (City Submission, Declaration of Mr. Jim Ashcraft ¶9). [Petition Exhibit 2]

[6] The definitions of a public drinking water system are set forth in Section 5 of this Petition.

[7] The December CAO acknowledges that the area north, northeast and south of the Site constitutes the Subbasin. (¶ 25). There is only ONE Subbasin and the City overlies part of it. Health & Safety Code § 116275(h)

[8] CLEANUP OR ABATEMENT ORDER NO. R3-2005-0014 March 10, 2005 "1. Olin Corporation and Standard Fusee Corporation (Dischargers), discharged or permitted the discharge of potassium perchlorate to waters of the state from a manufacturing facility located at 425 Tennant Avenue, Morgan Hill (Site), as shown on Figure 1."

[9] State Of California State Water Resources Control Board Order WQ 2005 – 0007, Page 2.

[10] Initial contact was made between Olin and the RWQCB in February of 2001.

[11] On December 8, 2003, the RWQCB issued General Waiver of Waste Discharge Requirements Resolution No. R3-2002-0115 (General Waiver). The General Waiver authorized Olin to extract and treat onsite groundwater, and discharge it to the City's Butterfield Retention Basin. On November 2, 2005, the RWQCB conditionally amended the General Waiver. The General Waiver amendment authorizes Olin to extract and treat onsite groundwater, and discharge it via onsite recharge (injection) wells, located on the north end of the Facility. Olin began uninterrupted operation of the onsite treatment system on February 23, 2004.

[12] As described in the 2005 CAO the Northeast Contamination Area is generally the area within the City's boundaries northeast of the Site. The record is replete with comment letters from the City, its Counsel and its Consultant on these issues. Numerous meetings and discussions with RWQCB Staff have also taken part relating to the Northeast Contamination Area and Olin's responsibility for this contamination.

Northeast Contamination Area. Obviously, the City has been concerned about the degradation of its groundwater supplies by Olin. However, as the record shows, the RWQCB has not been proactive in its enforcement efforts against Olin. On December 12, 2006, the RWQCB issued Cleanup and Abatement Order No. R3-2006-0112 Amending Cleanup and Abatement Order No. R3-2005-0014 (Amended CAO), but it merely required Olin to investigate the Northeast Contamination Area. While Olin has done some investigation, the Northeast Contamination Area still has not been characterized.[13]

The RWQCB circulated a Proposed CAO on September 18, 2007 (Proposed CAO). The RWQCB asked for stakeholders to file with them their comments on November 2, 2007. The City filed its comments on that date. (City's Submission). RWQCB Staff submitted various responses to comments from stakeholders on November 26, 2007. (Response to Comments). In the Response to Comments, RWQCB Staff set forth various items raised by each of the stakeholders and responded to each item.

In light of the Response to Comments and the issues they raised, the City requested an additional opportunity to either supplement the City Submission or prepare and bring to the hearing written comments supporting and augmenting its oral testimony. On November 30, 2007, counsel for the RWQCB informed the City by e-mail that supplemental submissions could be submitted by December 3, 2007 at 5:00 p.m. The City provided a supplemental submission to the RWQCB by that date and time. (City's Supplemental Submission). Subsequent to the e-mail received by the City from RWQCB Counsel, RWQCB Staff issued a Supplement Sheet for Regular Meeting of December 7, 2007 which contained further comments by staff (Supplement Sheet), and another revision to the Proposed CAO (November 30 CAO), as well as various attachments, some of which were requested by the RWQCB Chair regarding the City's Tennant Well. Thus, the RWQCB went to extensive lengths to revisit various issues prior to the December Hearing.

At the time of the December Hearing, the City's Supplemental Submission was denied entry into the record by the Chair as it allegedly did not respond to the changes made in the November 30 CAO. Further, the City's consultant's report submitted therewith was substantially redacted and only a portion of the report was allowed into evidence. The City objected to this ruling by the Chair and maintains that objection at this time. During the oral presentation and argument at the December Hearing, the salient points of a portion of the City's Supplemental Submission were placed on the record and will be discussed herein.[14] A request to present supplemental evidence is submitted concurrently herewith for the purpose of introducing evidence that would have been provided at this hearing if the City had been allowed to do so and other evidence relating to the Legislative intent behind the amendment to Water Code §13304 and City actions taken subsequent to the December hearing.

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[13] In Paragraph 43 of the December CAO, it states "Additional delineation of perchlorate concentrations in the deep aquifer is still required east of PZ-05." It would appear from this statement that the RWQCB is perhaps rescinding its Amended CAO regarding further concentration to the northeast of the Site.

[14] As noted in the transcript, that discussion was without waiving the City's rights to raise the improper denial of entry into the record. (Transcript, Page 15, Lines 14-24).

As previously noted, the December CAO was issued on December 14, 2007. This Petition is in response to the failure to act and the actions taken by the RWQCB as expressed in the December Hearing and the December CAO.

5. The RWQCB Must Issue a Water Replacement Order for the Tennant Well

(a) Tennant Well History

The Tennant Well was installed and commenced operation in 1979. Its supply capacity is approximately 450gpm. The Tennant Well tested at 5.1 ppb perchlorate on 4/30/01, when the Action Level (now Notification Level) was still 18.0 ppb. Tennant tested at 5.5 ppb perchlorate on 4/17/02, (after the Action Level was lowered to 4.0 ppb) and was removed from service. (City Submission, Declaration of Mr. Jim Ashcraft, ¶5, hereinafter Ashcraft Dec).[15] [Petition Exhibit 2]

Subsequent to its removal from service, the City entered into negotiations with Olin, who eventually agreed to pay for a new well, later called the San Pedro Well. The San Pedro Well produces approximately 600gpm. There was never any formal agreement with Olin concerning the San Pedro Well. No rights were reserved nor given up.

The City had been pursuing installation and operation of the San Pedro Well in its continuing efforts to meet the growing needs of the City. At the time the San Pedro Well was being considered, it was thought that it would be operated along with the Tennant Well. Granted, the money from Olin allowed the City to expedite the drilling of the San Pedro Well. And, because the San Pedro Well production exceeded that of the Tennant Well, the City was initially amenable to shutting off the Tennant Well while it looked for alternative water resources. The San Pedro Well was to augment the Tennant Well's production and was only one of the wells that the City always intended to drill during the 2000 -2020 horizon to meet anticipated growth. (Ashcraft Dec ¶6)

The San Pedro Well, which also tested positive for perchlorate, has not proved to produce sufficient volume of water to serve the City's customers without the use of the Tennant Well.[16] [17] Therefore, to meet the water needs of the City, especially for the summer of 2004, the Tennant Well was put back into operation on October 7, 2004 with an IX perchlorate removal system.

By letter of May 11, 2004, the RWQCB requested that the operation of the Tennant Facility be on a 24/7 basis to support remediation, but all at City ratepayer's expense. To date, the City has operated the Tennant Well and the IX system continuously in accordance with that request. (Ashcraft Dec ¶7) The Tennant Well has been tested at least weekly, and at some times daily, to determine its perchlorate content. For the first half of 2007, the levels were no lower than 4ppb and reached 6ppb on numerous occasions (and on 1/23/07 the reading was 7ppb) and since July 2007 they have always been at 6ppb and above. (Ashcraft Dec ¶13)

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[15] It should be noted that at the Hearing, there was no refutation of any of the facts contained therein by the RWQCB or Olin.

[16] See Transcript, Page 133, Line 2 to Page 134, Line 1, and the accompanying graph discussed with the RWQCB, attached as Petition Exhibit 3.

[17] Additionally, another City well in the Northeast Contamination Area, the Condit Well, tested at 5 ppb in February 2003 and has been off line since that time. The Condit Well is the closest City well northeast of the Site. It is a very small well (200 gpm) and its operation makes marginal economic sense. (Ashcraft Dec ¶7)

Since the commencement of operation of the San Pedro Well, the City has looked for additional ground water supplies to meet the increasing demands of a growing population.[18] The City drilled three separate unsuccessful wells in various locations within the City. The Peet Well was drilled in April, 2003; the Mission View Well was drilled in September 2006; and the Half Road Well was drilled in September, 2007. Unfortunately, all three of these wells failed to produce sufficient water and have been abandoned. (Ashcraft Dec ¶8)

The City has spent more than $300,000 of rate payer funds on system permitting, operation and maintenance on the Tennant Well IX system. The City expects that the future annual cost of O&M and lease on the equipment will be on the order of $120,000 per year for continuous 24/7 operation. (Ashcraft Dec ¶10). The City has had to fund its perchlorate related activities including the costs associated with the Tennant Well through a 15% surcharge on its rate payers' monthly bills. (Ashcraft Dec ¶11). In light of the issuance of the perchlorate Maximum Contamination Level (MCL) and the related documentation issued by the Department of Public Health regarding the MCL, for the Tennant Facility to continue to operate, it must continue using the perchlorate removal equipment. (Ashcraft Dec ¶14). The RWQCB has expressed concern over the City's plight, but has failed to act as required to eliminate this burden.

On November 8, 2007[19] the City requested that the issue of water replacement for the Tennant Well be placed on the agenda for the Hearing. It was placed on the agenda but, in violation of Water Code §13304, the RWQCB refused to issue an order for replacement stating, in essence that:

- Since the Tennant Well was replaced by the San Pedro Well, no further action can be taken. (Transcript, Page 22, Lines 9-18; Page 166, Lines 8-10 and 15-20; Page 168, Lines 16-25)[20]

- Since the San Pedro Well pumps more then the Tennant Well, no further action can be taken. (Transcript, Page 167, Lines 18-25)

- That there was no evidence of the need for more water replacement. (Transcript, Page 168, Lines 13-22)

As the City will show herein, each of these positions is wrong.

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[18] In 2001 the population of the City was 34,600; in 2004 the population was 35,500 and currently it is 38,400. The City's Master Plan calls for further growth such that in 2010 the expected population is projected at 41,000 and in 2020 the projection is 48,000. (Ashcraft Dec ¶9).

[19] Letter to Roger Briggs dated November 8, 2007. [Petition Exhibit 4]

[20] The installation of the San Pedro Well was never as a result of any order or request of the RWQCB. Rather, it was a private matter between the City and Olin. There are no contracts or agreements regarding the San Pedro Well. It was a "no strings" transaction. (Transcript, Page 126, Lines 13-17).

(b) The RWQCB Should Have Provided for a Water Replacement Order as Required in Water Code §13304

There are several bases supporting the overturning of the RWQCB's refusal to issue a CAO for water replacement water. These are discussed below.

(i) Water Code §13304 is applicable to the City's entire system, not just the Tennant Well

Water Code § 13304(a) was amended in 2004 to include the following sentence:

> A cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service, which may include wellhead treatment, to each affected *public water supplier* or private well owner. (Emphasis added.)

(1) Critical distinction

It is important to note from the outset that the Water Code §13304(a) remedies pertain to two distinct groups—private well owners and public water suppliers. With regard to the first group, private well owners, Olin is replacing water for numerous single private wells within the swath of the plume.[21] Because this group does not have water supply systems, the appropriate Water Code § 13304 remedy is not system-wide. However, the remedies necessary to address the harm to the other group, public water suppliers, must necessarily be different because the harm caused by the perchlorate contamination is qualitatively different as it impacts a water supplier's system at different times and in different ways. Thus, the remedies under Water Code §13304 are not limited to single wells operated within a supplier's system, as would apply in the context of private well owners, but rather must be appropriate for a "supplier" i.e. one who supplies water to the public, such as the City. The City supplies water through the operation, not of just one well, but of a system of wells.

What is a public water system? A public drinking water system is an important defined term under the California Safe Drinking Water Act. (CSDWA) It is defined as:

> "...a system for the provision to the public of water for human consumption, as defined in Chapter 4...[the CSDWA]. Health & Safety Code § 116760.20(i).

Further, the CSDWA defines a public water system as:

> "Public water system' means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year."

[21] While the City is unaware of this occurring, it poses the question that if a homeowner's family grew, or his house got bigger and more bottled water was needed, would the RWQCB refuse to require Olin to supply the family what it needed, even if it was more then had been supplied to that time?

Applicable also to California is the Federal Safe Drinking Water Act which defines a public water system as:

> "...a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals." (42 U.S.C. § 300f(4)(A).)

It should be clear by the very terms of Water Code §13304(a) that it applies to the system of the public water supplier and not necessarily only single individual wells within that system. As noted above, the so called replacement of the Tennant Well by the San Pedro well was only a temporary fix to the volume of water needed for the public water supply system of the City. As it turned out, despite its best attempts, the City could not find additional sources of water and, as such, its public water supply system required additional water supply. Unfortunately, the only source of magnitude to meet the water supply needs was to use the Tennant Well. This system approach is clearly what the Legislature had in mind by authorizing the RWQCB to order a polluter to replace water a public water supplier needs for its system so that it may serve water to its consumers.

(2) The Legislative Counsel Digest supports the City's position

The Legislature was aware of the reluctance demonstrated by various RWQCBs to provide that polluters supply replacement water to affected water suppliers because of the fear of being challenged by the polluters. Because of this, the Legislature had to act to provide a clear requirement to the RWQCB to accept the needs and realities of the impacts of pollutants on drinking water suppliers. This was what the passage of SB 1004 (Soto) did.

The Legislative Counsel's Digest [Petition Exhibit 5] reports in its comments regarding SB 1004 (Soto) which sought to amend Water Code § 13304:

> This bill would provide that a cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service to each affected public water supplier or private well owner.

Assembly Floor, 3d reading analysis of Sen. Bill No. 1004 (2003-2004 Regular Session) September 9, 2003, Page 5 [Petition Exhibit 6] provides:

> 3) Replacement water issues: On occasion, the boards have included in their cleanup and abatement orders a requirement that the responsible party provide replacement water. *The boards seldom do this, however.* In 2002, for example, SWRCB issued twenty drinking water cleanup orders, but not one required the provision of replacement water.
>
> a) Some responsible parties have challenged the boards' authority to require replacement water. This bill authorizes SWRCB, as part of a cleanup and abatement order, to require the responsible party to either

provide or pay for a replacement supply, removing the possibility of a challenge to the board's authority.

b) Arranging and paying for a replacement water supply can be expensive for *public water systems*, and smaller systems may be financially overwhelmed. The City of Colton, for instance, was forced to pay $4,000 per day to provide water to its residents after perchlorate was found to be contaminating most of the city's wells. (Emphasis added).

The legislative history supports the City's position that RWQCB should issue a CAO which orders Olin to compensate for damage to the City's water system.

"[G]iving SWRCB this authority [to order replacement water] will allow the apportionment of costs to take place between the responsible parties and the affected water suppliers in an administrative setting outside of the courts. This will allow for more timely provision of replacement supplies, and save litigation expenses. Since the order for replacement water will be part of a cleanup and abatement order, SWRCB will already have done the underlying investigative work to identify the responsible parties. Local water agencies can account for the amount of water they have to buy, or that they can no longer pump from their wells." Assembly Committee on Water, Parks and Wildlife, SB 922 (Sota)—As Amended: June 2, 2003 (AP2-1 to AP2-4.) [Petition Exhibit 7]

"Potential drinking water supply" is defined "as a supply that is scheduled for use as indicated by an urban water management plan." Assembly Committee on Environmental Safety and Toxic Materials, SB 922 (Soto)—As Amended: June 2, 2003. [Petition Exhibit 8]

California faces some major water contamination problems. . . According to proponents of this bill, 70 billion gallons of potential drinking water go unused each year due to contamination. This is enough to supply 400,000 families for a year.

When a responsible party contaminates a water supply, either above or below ground, one of the consequences may be the need for users of that water supply to seek alternative supplies. Under the Porter-Cologne Act, SWRCB and the nine Regional Boards are authorized to issue cleanup and abatement orders to persons or corporations that have discharged contaminants into water supplies, either above or below ground. Assembly Committee on Water, Parks and Wildlife, SB 1004 (Soto)—As Amended: September 9, 2003 (Emphasis added). [Petition Exhibit 9]

It is clear that the purpose of this legislation was to allow a water system to be put back in a position comparable to the one it was in before the contamination impacted its water supply. It is clearly not a well for well replacement. It was meant to be far more dynamic.

Beyond logic, further supporting this position is the reading of §13304(f) which defines "replacement water".

> "(f) Replacement water provided pursuant to subdivision (a) shall meet all applicable federal, state, and local drinking water standards, and shall have comparable quality to that pumped by the *public water system* or private well owner prior to the discharge of waste." (Emphasis added)

That the term public water supplier is meant to cover the public water supplier's system should be clear. Both terms are apparently used interchangeably by the Legislature. Therefore, reading §13304(a) along with §13304(f) the text would be as follows:

> A cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service which shall meet all applicable federal, state, and local drinking water standards, and shall have comparable quality to that pumped by the public water system or private well owner prior to the discharge of waste, and, which may include wellhead treatment, to each affected public water supplier or private well owner

Looking at §13304 as a whole, it does not support the position of the RWQCB, but clearly supports the position of the City.

(c) The evidence is overwhelming, yet the RWQCB refuses to look at it

Counsel for the RWQCB comments in response to Chairman Young and Member Hunter that:

> DR. HUNTER: Just so I'm clear, there is no way to then add the condition that the treatment of the Tennant Well is then something Olin should be responsible for?
>
> MS. McCHESNEY: Not at this time based on the information we have. (Transcript, Page 167, Lines 12-16)

> CHAIRMAN YOUNG: What about the fact that they've drilled some additional wells and they've come up inadequate?
>
> MS. McCHESNEY: Right. There may be further information that's appropriate for this board to order Olin to replace wells, but specifically

the Tennant well, the information in the record now is they already did that. That's all I'm saying. (Transcript, Page 168, Lines 13-22)

In the December Hearing, Counsel for the City summed up the City's position on the "evidence":

There's information in the record, obviously, that we think you're not looking at... (Transcript, Page 173, Line 25 to Page 174, Line 1)

In fact, the evidence is substantial, and remains completely unrebutted, that Olin is responsible for the harm to the Tennant Well.[22] As such, the RWQCB is acting in an arbitrary and capricious manner by taking this position. This evidence shows that the Tennant Well:

- Was needed to be placed back on line due to a water shortage and that the RWQCB agreed that this was true.
- Was to be operated on a 24/7 basis at the request of the RWQCB to which the City agreed;
- Could not be replaced by other sources of water despite three separate attempts at drilling "dry" wells;
- Could not be taken off line without the City failing to meet the needs of its community's water needs;
- Will be needed into the immediate future to meet water demand;
- Was contaminated to the degree that it exceeds the MCL and requires the use of a perchlorate removal facility to meet the state's requirements;
- Is contaminated by Olin's perchlorate.

(d) The hypocrisy of the RWQCB's position

While the RWQCB steadfastly clings to its improper interpretation of Water Code §13304, it states that if the City were to drill another well then the RWQCB could issue a water replacement order. Thus, if space permitted, the City could drill "Tennant #2" mere feet away from the Tennant Well and the RWQCB would then, and only then, take action on water replacement and issue a Water Replacement Order. It should be clear to anyone thinking rationally about this that the RWQCB's position makes no sense at all and is arbitrary and capricious.

In the hearing, the following exchanges and comments between the members of the Board, the Executive Officer, Counsel and Staff set forth this position.

[22] The evidence concerning the water needs and the issues relating to Tennant Well is all in the record. See Attachment A listing same.

MR. SHALLCROSS: And if someone moves into the area or decides that they want to put in a new well, like into Zone A in intermediate, will Olin then have to provide cleanup --

MS. TRYON: Yes.

MR. SHALLCROSS: -- into the future --

MS. TRYON: Yes. (Transcript, Page 31, Lines 14-20)

CHAIRMAN YOUNG: I know. It just so happens that that well a mile south happens to be the Tennant well because of their need for water.

MS. McCHESNEY: ... And if Morgan Hill chooses to drill some other well and it's contaminated, you know, polluted above 6.0, then you would certainly have the authority to order Olin to replace that well under the Water Code. (Transcript, Page 165, Line 18 to Page 166, Line 14)

CHAIRMAN YOUNG: It seems to me that if the city went ahead and drilled another well and it came up contaminated –

MS. McCHESNEY: Right, then you could order Olin to replace (Transcript, Page 166, Lines 22-25 to Page 167, Line 1)

The RWQCB is throwing practicality and the facts to the wind in what can only be viewed as an arbitrary and capricious manner and in violation of law.

(e) The RWQCB Previously Agreed that the Use of the Tennant Well with Wellhead Treatment Could be "Replacement Water."

On May 13, 2003, the RWQCB sent a letter to Mr. Richard McClure (Olin). The letter was written in light of the need to use the Tennant Well to deal with what the RWQCB stated were "severe water shortages this summer, especially with the shutdown of three other wells due to sporadic detections of perchlorate."[23] [Petition Exhibit 10] In this same letter the RWQCB advised Olin that the:

[23] Exhibit 8 to the City's Submission. Also note, the wells in question were Nordstrom and Condit. The City installed an ion exchange system on Nordstrom and employed it as soon as it was operable. The Condit well, which had significantly high readings of perchlorate was idled and has remained idled.

> Regional Board may require Olin to abate the effects of its discharge of waste. Consequently, the Board may require Olin to provide the City with an alternative water supply or take other actions to abate, among other things, the City's inability to use the Tennant Avenue well.

The RWQCB goes on to suggest that Olin "work cooperatively with ... the City of Morgan Hill to coordinate purchase, installation, operation and maintenance of a wellhead treatment system." The City remains open to such discussions, but Olin is not talking. Unfortunately, the RWQCB has not even seen fit to broker such discussions.

(f) The RWQCB Should Issue a CAO Ordering Olin to Provide for Wellhead Treatment at the Tennant Well.

The contribution made by Olin to fund the earlier than anticipated drilling of the San Pedro Well was never a part of a RWQCB approved "water replacement plan." See §13304(h),(i). In fact, as Olin would admit, it made the contribution voluntarily with "no strings" attached. There were never any "settlement documents" or other such instruments executed. As noted "[t]he City was amenable to keeping the Tennant Well offline because Olin agreed to pay for the costs of replacing it with a new well, which turned out to be the San Pedro Well" (Ashcraft Dec ¶6). And in fact, the Tennant Well remained off line until it was needed due to severe summer shortages and the failure of finding additional sources. (Ashcraft Dec ¶7).

Consequently, this payment by Olin only served to buy it some time before the City had pursued its remedies under Water Code §13304. That time has arrived. The San Pedro well does not produce enough water to "replace" the need for operating the Tennant Well with its IX system and, thus, at this time it can not be considered a replacement for the City's system current needs. Given this, the RWQCB has the power to order that Olin supply the City with replacement water and must exercise it.[24]

(g) The RWQCB can Issue a CAO which Orders Olin to Pay for the Operations of the Tennant Well Perchlorate Facility

In the December Hearing Chairman Young discussed the issue of the RWQCB's authority to deal with recovery of costs by the City in regard to the Tennant Well. He stated:

> CHAIRMAN YOUNG: I don't know if we have enough information at this point for the board to maybe resolve that component of the cleanup and abatement order. It may be something the board wants to be briefed further, you know, in the short term to get it resolved. But I've heard enough that I just have more questions and I would like to see more analysis. And if there was some kind of cost recovery around, I don't know what that number should be if it is allowed and when it would start and how much. If they can drill another well and get clean water, perhaps that's what they should do. There's a lot of things for us to hear about

[24] Of course, the City would be willing to entertain other sources of water beyond the Tennant Well if they were available immediately.

before we can further weigh in on it, so. (Transcript, Page 76, Lines 10-23)

In response, Mr. Briggs said:

MR. BRIGGS: I'm not sure that's our purview anyway as far as the cost. (Transcript, Page 76, Lines 24-25)

The City asserts that Mr. Briggs is incorrect. Water Code §13304(a) permits the RWQCB to issue a CAO that could include the "*payment for*, uninterrupted replacement water service..."[25] Indeed, given the prior history of the RWQCBs noted by the Legislature in granting water replacements out of fear of challenge by the polluters, it seems appropriate that the Legislature wanted to provide the full breadth of power to make clear to the RWQCBs what they can do. Indeed, without the power to require payment Water Code §13304 would not eliminate the hardship placed on various communicates that have to deal with a polluters legacy.

(h) There is No Quantity/Time Limitation for Replacement Water

The RWQCB and Olin wrongly take the position that since the San Pedro Well produces more water than the Tennant Well, Olin's replacement obligations have been met. This is an improper analysis of the extent of Olin's obligations under Water Code §13304. The appropriate view is that the statutory remedies must address the harm to the water supplier's system. As the City has stated repeatedly, the harm caused by Olin's perchlorate contamination is the harm to the City's water supply as a whole, which has been adversely impacted by the contamination of the Tennant Well.

There is absolutely no "quantity" (gallonage) limitation, or any other quantity reference, in any of the §13304 analysis or remedies. In fact there is no reference to volume at all. If the legislature had intended such a limitation, it could have done so.

Further, nowhere in Water Code §13304 or its legislative history, is there any indication that the issue of replacement water is fixed in time. That is, the fact that Olin took an action four years ago does not mean that changes in circumstances can not be taken into account, especially in light of the fact that there was no water replacement order ever issued in favor of the City by the RWQCB. Since replacement water is provided pursuant to §13304 by the issuance of a CAO, the Legislature clearly anticipated that the RWQCB would be able to review and alter such an order, just as it does in any CAO, to meet newly discovered issues, data and other matters impacting on the substance and goal of the CAO. The RWQCB may rescind an order and issue a new order (as the case of the December CAO) or it may amend a CAO as it did in this matter when it issued Cleanup and Abatement Order No. R3-2006-0112 that amended Cleanup and Abatement Order No. R3-2005-0014.

This statutory remedy scheme makes sense as the need for water varies from time to time, both seasonally and otherwise. Also, as is evident here, the process of remediation runs many years, even decades. The need to supply replacement water to a public water system and its supplier can change over time and, as noted, that is what has occurred here.

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[25] As the section does not say prospectively only, the City asserts that it does not preclude a retrospective analysis.

6. The Tennant Well Perchlorate Removal System Should be Part of the Remediation of the Subbasin.

(a) The Tennant Well has Removed Significant Amounts of Olin's Perchlorate from the Subbasin

To date, the City has pumped approximately 591,000,000 gallons of contaminated water from the Tennant Well. The IX system has removed approximately 63 pounds of perchlorate from the aquifer. (Ashcraft Dec ¶12) That means that there is 63 pounds less perchlorate in the Subbasin, there is 63 pounds less perchlorate moving southward to impact the rest of Area 1 and beyond, and 63 pounds less perchlorate that Olin has to remediate. And this was done because of the City's need for the water and the agreement (noted below) to run Tennant 24/7, completely at the cost of the City's ratepayers.[26]

(b) The City has Requested this Action

At the September 7, 2006 RWQCB hearing, City Manager Ed Tewes asked the question: "Why should the City keep paying for the operation of the Tennant Facility which is removing Olin's perchlorate?" On repeated appearances at hearings, Mr. Tewes and the Director of Public Works, Mr. Jim Ashcraft, have continued to ask the same question. This request was repeated in a letter to the RWQCB by Counsel for the City dated May 22, 2007.[27] [Petition Exhibit 11, and in the City's Submission.] At the December Hearing, the City once again renewed its request. (Transcript, Page 116, Lines 17-20; Page 133, Lines 1-2; Page 134, Lines 7-12).

(c) The RWQCB Claims it is Impotent

In the City's Submission, the City raised the issue with the RWQCB:

> The Proposed CAO should include use of the Tennant Well to "cleanup perchlorate-impacted groundwater to achieve background concentrations" in the "Area 1." (Proposed CAO, paragraphs A and D.)[28]

RWQCB Staff stated that:

> If Olin chooses to propose the continued operation of the wellhead treatment system as part of its remediation strategy, Water Board staff will consider that proposal when reviewing the overall cleanup strategy. (Comments in Response to the City, Item 1)

RWQCB Staff's Response to Comments[29] avoids any reference in the City's Submission regarding the SWRCB's Policy 92-49. (92-49). As set forth clearly in the City's Submission,

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[26] The City's Nordstrom Well operated with a IX system. Up to today, the City pumped 944,371,120 gallons of contaminated water at that well site and thus it served as the only remediation point in the Northeast Contamination Area.

[27] Exhibit 4 to the City's Submission

[28] Same paragraphs in the December CAO

92-49 encourages the RWQCB to "suggest" to Dischargers what should be done to remediate contamination.[30] Such a policy makes sense because if no "suggestion" is offered by the RWQCB as to what should be done to effectuate the objectives and/or requirements for cleanup it sets forth, the following would likely happen:

- The Discharger could flounder about trying to come up with the appropriate remedy by some hit or miss method; or

- The Discharger could only suggest what is only minimally required and financially the cheapest even though it fails to meet objectives and/or requirements for cleanup; or

- The Discharger could avoid any communication that could trigger a response by the RWQCB which the Discharger does not want.[31]

In all three instances, the RWQCB would be forced to merely hope that the Discharger comes up with the right formula at some time. In the meantime, the contamination would persist and continue unabated. RWQCB's position that it must wait for Olin to suggest a course of action is illogical and amounts to nothing more than an improper refusal to act. It is simply not consistent with the RWQCB's mission or the law and the policies of the SWRCB, that it is helpless to act unless "Olin happens to suggest the right thing.

Olin certainly hasn't floundered; indeed Olin is a sophisticated company involved in many sites across the nation and it fully understands the rules of the game and has played them well. In fact it has played it so well, that the RWQCB has permitted Olin to set the agenda for the remediation, which agenda prompts the RWQCB to merely respond with no or yes.

Adding to this unsupportable position is that in the Response to Comments by the City, RWQCB Staff states:

> ...[i]f Olin does not propose this option, staff will consider what additive benefits Tenant wellhead treatment could provide (e.g., faster cleanup, improved plume containment) when considering Olin's final well extraction locations for the groundwater cleanup remedy in Area I. (Response to Comments by the City, Item 1)

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[29] Staff merely references the letter to the City dated June 29, 2007 authored by Ms. Okun.

[30] The Resolution states: "18. WC Section 13360 prohibits the Regional Water Boards from specifying, but not from suggesting, methods that a discharger may use to achieve compliance with requirements or orders. It is the responsibility of the discharger to propose methods for Regional Water Board review and concurrence to achieve compliance with requirements or orders". (SWRCB Resolution 92-49) (Emphasis added.)

[31] It should be noted that in a letter written to Olin by the RWQCB dated October 6, 2006 (City's Submission Exhibit 14) the RWQCB proclaims: "We specifically suggested [referencing a prior letter] that while Olin waits for the results of the Water District's forensic chemistry study Olin may develop a background perchlorate concentration in groundwater using the Title 27 methodology to demonstrate that the detectable concentrations of perchlorate in groundwater within the Llagas Subbasin are attributable to an anthropogenic source(s) other than Olin."

Since the Tennant Well was returned to service in 2004 it has performed yeoman's work in cleaning up Olin's perchlorate. Yet the RWQCB staff has taken the position that Olin has not proposed the option of including the Tennant Well as part of the Subbasin's remediation. During this period of Olin's silence, RWQCB Staff stood silently by and has not acted on its own to consider the "additive benefits Tenant wellhead treatment could provide" to the remediation process.[32] This is an inexcusable failure to act.

(d) In Contradiction to the Claim of Impotence, the RWQCB Refuses to Do What It Said It Would

In yet another round of double talk, in the Response to Comments by the City, RWQCB Staff states:

> ...[i]f Olin does not propose this option, staff will consider what additive benefits Tenant wellhead treatment could provide (e.g., faster cleanup, improved plume containment) when considering Olin's final well extraction locations for the groundwater cleanup remedy in Area I. (Comments in Response by the City, Item 1)

Since the Tennant Well was returned to service in 2004 and has performed yeoman's work in cleaning up Olin's perchlorate, the RWQCB staff has taken the position that Olin has not proposed the option of including the Tennant Well as part of the Subbasin's remediation. During this period of Olin's silence, RWQCB refused to act on its own, as it said it would, to consider the "additive benefits Tenant wellhead treatment could provide" to the remediation process.[33] [Petition Exhibit 10]

Then in contradiction to the foregoing, RWQCB Staff says it is waiting for Olin to make the first move, but says that Olin has already rejected the use of the Tennant Well as part of the remediation.

> Olin's position is that the Tennant Well will not provide additional containment of the plume that the proposed Area I extraction wells will not provide. (Sic) (Response to Comments by the City, Item 1)

Further, at the December Hearing, Olin's consultants quite clearly stated Olin rejects the use of the Tennant Well for remediation. (Transcript, Page 71, Lines 3-8). The City therefore called upon the RWQCB to take the action it said it would, but the RWQCB steadfastly refuses to act.

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[32] As noted by the City in its Submission, RWQCB Staff has already determined "The extraction and treatment of perchlorate contaminated water at the Tennant Avenue well will reduce the mass of perchlorate leaving the area and will provide partial hydraulic containment of the plume within the well's radius of influence." (City's Submission Exhibit 8.) [Petition Exhibit 10]

[33] As noted in the City's Submission, RWQCB Staff has already determined "The extraction and treatment of perchlorate contaminated water at the Tennant Avenue well will reduce the mass of perchlorate leaving the area and will provide partial hydraulic containment of the plume within the well's radius of influence." (City's Submission Exhibit 8.)

(e) City's written request and the RWQCB's response

(i) The City request

The City requested on May 22, 2007[34] that the RWQCB "take all appropriate action to require that the operation of the City's Tennant Well" be included as part of the Subbasin cleanup. The reasons set forth in this request are summarized as follows:

- Water Code § 13304(a) permits the RWQCB to order Olin to "cleanup the waste or abate the effects of the waste...and take other necessary remedial action including, but not limited to, overseeing cleanup and abatement efforts."

- State Board Resolution 68-16, cited and relied on in both the 2005 CAO and the December CAO, states in pertinent part:

  > "Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed."

- The RWQCB has found, as referenced in the 2005 CAO, that Olin's perchlorate "degraded high quality waters of the state in violation of this objective." (Paragraphs 5, 33).

- State Board Resolution 92-49 cited and relied on in both the 2005 CAO and the Proposed CAO requires the RWQCB to "implement" procedures to:

  > "...ensure that dischargers shall have the opportunity to select cost-effective methods for detecting discharges or threatened discharges and methods for cleaning up or abating the effects thereof..."

The City asserted in the City Submission that the operation of the Tennant Facility over the last three years has clearly satisfied the requirements of the Resolutions 68-16 and 92-49. The Tennant Facility is remediating perchlorate from the Subbasin south of the Site. It is doing so in a remarkably cost effective manner that is consistent with the use of groundwater to the maximum benefit of the people of this State. No one has rebutted this statement.

The RWQCB has the authority to shift the cost of operating the Tennant Facility from City ratepayers to Olin. Apparently, the RWQCB is unwilling to use this authority. For the RWQCB to completely exclude the Tennant Facility from consideration is arbitrary and capricious.

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[34] Letter to Ms. Lori Okun, Exhibit 4 to City's Submission. [Petition Exhibit 11]

(ii) RWQCB Response

On June 29, 2007, Ms. Lori Okun, Senior Staff Counsel, Office of Chief Counsel, responded to the City's request.[35] [Petition Exhibit 12] Her letter contained various interpretations of facts and statements which the City found disquieting and which do not form an appropriate rationale for a refusal of the City's request. Ms. Okun's rationale was relied upon by the RWQCB at the December Hearing[36]. The statements of note in the letter are discussed seriatim below.

Statement #1: "The Central Coast Regional Water Quality Control Board (Water Board) cannot "specify the design, location, type of construction, or particular manner in which compliance may be had" with the CAO, and Olin may "comply with the order in any lawful manner." (Ca. Wat. Code §13360)."

City's Analysis of Statement #1: As required by Water Code §13307, the State Water Board is to establish policies and procedures for the RWQCB including for the "oversight of investigations and cleanup and abatement activities resulting from discharges of hazardous substances." That requirement led to SWRCB Resolution 92-49 which sets forth various policies for the RWQCBs to follow when issuing CAOs.

In contrast to Statement #1, Resolution 92-49 does not prevent the RWQCB from suggesting to Olin that the Tennant Well should be included in the remediation. The Resolution states:

> "18. WC Section 13360 prohibits the Regional Water Boards from specifying, but *not from suggesting, methods that a discharger may use to achieve compliance with requirements or orders*. It is the responsibility of the discharger to propose methods for Regional Water Board review and concurrence to achieve compliance with requirements or orders". (SWRCB Resolution 92-49) (Emphasis added.)

Statement #2: "...staff has not concluded that operating the wellhead treatment system at the Tennant Avenue Well or an equivalent action is necessary to comply with the CAO or Resolution No. 92-49, either as an interim or final measure."

Statement #3: "At this time, Water Board staff cannot determine whether operation of the Tennant Avenue Well provides hydrogeologic containment of the plume that would otherwise not be provided by the recently proposed Area I extraction wells."

City's Analysis of Statements #2 and #3

As noted above, the RWQCB has, in fact, already determined that operation of the Tennant Facility will "reduce the mass of perchlorate leaving the area and will provide partial

[35] City's Submission Exhibit 6.
[36] Transcript (Page 166, Lines 15-21).

hydraulic containment of the plume within the well's radius of influence."[37] Given this statement, it would appear that there need be no further discussion on this point and the RWQCB should have moved on the City's request.

Further, as noted in Ms. Okun's aforementioned June 29, 2007 letter:

> "As you point out, the Tennant Avenue Well has removed a large amount of perchlorate so we encourage the City to continue well operation".

The December CAO states quite emphatically that "State Board Resolution No. 92-49 provides that the goal for cleanup should be to remove pollutants to background levels." (Paragraph 15). The operation of the Tennant Facility is making strides towards accomplishing this. This is consistent with Olin's Feasibility Study, June 30, 2006 ("FS")[38] [Petition Exhibit 2] that states:

> "The purpose of this Cleanup FS is to address the Llagas Subbasin cleanup alternatives and provide an analysis of alternatives for long-term, Llagas Subbasin-wide groundwater cleanup to *remediate perchlorate-impacted groundwater associated with the Site*, in response to the CAO, specifically Ordering Paragraph J". (1.1 Purpose). (Emphasis added).

In fact, the method of removal is one that Olin and the RWQCB believe is viable for Area 1. In the Olin FS when referencing to ex situ remediation alternatives, Olin concludes that:

> "Because of relatively low perchlorate concentrations within Area I and due to ion exchanges documented achievements in reducing perchlorate to less than the current PHG (e.g. at the on-Site system, domestic wells, and the West San Martin Water Works (WSMWW) and San Martin County Water District (SMCWD) systems), IX is assumed to be the technology of choice for the treatment component of any ex situ system". (6.3.4.1 Treatment – Area I)[39]

(iii) The RWQCB has the power to order that the Tennant Well be protected

The RWQCB has steadfastly continued to hide behind a misinterpretation of Water Code §13360 stating it bars the RWQCB from requiring Olin to include the Tennant Well into its remediation plan. However, Water Code §13360 does not bar the RWQCB from requiring Olin to protect the Tennant Well from Olin's perchlorate waste. In fact, it provides the RWQCB with

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[37] City's Submission Exhibit 8

[38] City's Submission Exhibit 11.

[39] In Olin's revision Feasibility Study of December 6, 2006 [Exhibit 12], Olin states: "IX is an applicable technology for treatment of extracted water in all Priority Zones in the Llagas Subbasin."... "As a result, IX appears to be the best ex-situ treatment technology for treatment of perchlorate in the Llagas Subbasin." Ion exchange is the leading treatment technology because of: (1) relatively low perchlorate concentrations in the basin, (2) it is effective at reducing perchlorate to less than the PHG, and (3) because of its successful implementation and use in the on-Site system, at various domestic wells, and at the WSMWW and San Martin County Water District IX systems. Therefore, IX is assumed to be the technology of choice for the treatment component of any ex-situ system. (6.3.4 Ex-Situ Treatment)"

specific power to do so.

However, RWQCB Staff has closed its eyes to the issuance of an order that Olin must investigate and perform the necessary tasks to assure that its perchlorate does not affect the Tennant Well. In doing so, the RWQCB is not specifying the design, location, type of construction or manner by which this can be accomplished. It would merely be issuing a Water Code §13304 order which requires Olin to "cleanup the waste or abate the effects of the waste."(Water Code §13304). RWQCB has refused.

(1) Such an order would be consistent with 92-49

Resolution 92-49 states that the RWQCB must:

> "Require the discharger to extend the investigation, and cleanup and abatement, to *any location affected* by the discharge or threatened discharge" (Paragraph II.A.3 – Emphasis added.)

The Tennant Well, with perchlorate levels above 6ppb, is certainly affected by Olin's pollution of the Subbasin.

(2) The possibility that there may be only one practical way to meet this requirement is not a violation of Water Code §13360

While the City asserts that there are likely several possibilities as to how protecting the Tennant Well may be accomplished, Olin may take the position that since there is only one real practical method, i.e. treat the water coming from the well, that, therefore, such a requirement by the RWQCB to protect the Tennant Well would be a violation of Water Code §13360, which prohibits a RWQCB from ordering a particular manner in which compliance with an order can be achieved. The Courts have held otherwise.

In *Tahoe-Sierra Preservation Council et al. v. State Water Resources Control Board, et al.* (1989) 210 Cal.App.3d 1421, various landowners and non-profit corporations brought suit challenging the validity of an erosion control plan (Plan) adopted by the State Water Resources Control Board (SWRCB) to prevent increased surface runoff of water carrying soil products into Lake Tahoe, caused by the increased land coverage of new development from turning the lake from clear blue to turbid brown. Among other grounds, the plaintiffs claimed that the Plan violates Water Code §13360. The Plan precluded water runoff above that which could occur under the permitted limitations on land coverage.

The Plan prohibited discharge of waste attributable to new development in stream environmental zones or new development not in accordance with the Plan's classification system. In essence, the Plan sought to control the water quality of Lake Tahoe by limiting the introduction of sediment, nutrients and other soil products into the lake through water runoff by regulation of the amount of impervious surface coverage of land within the Lake Tahoe basin.

Plaintiffs contended that the Plan was invalid because it conflicts with Water Code §13360. The Court of Appeals stated that the contention was "devoid of merit." In reference to the plaintiffs' contention, the court stated:

That is to say, the Water Board may identify the disease and command that it be cured but not dictate the cure. The Plan sets a discharge prohibition--no greater discharge than would occur if the coverage standard were met. It does not dictate the manner in which a landowner can meet the standard. This presents no violation of section 13360. Plaintiffs appear to argue that the Water Board has violated section 13360 because the Water Board expects that the only practical manner of complying with the discharge standard is to comply with the coverage restrictions. *Plaintiffs' claim, boiled to its essence, is that if only one manner of meeting a discharge standard is feasible the Water Board may not prohibit the discharge. This contention is devoid of merit.* (*Tahoe-Sierra Preservation Council,* supra at 1438) (Emphasis added)

The court further explained:

Section 13360 is a shield against unwarranted interference with the ingenuity of the party subject to a waste discharge requirement; *it is not a sword precluding regulation of discharges of pollutants*. It preserves the freedom of persons who are subject to a discharge standard to elect between available strategies to comply with that standard. That is all that it does. If, under present conditions of knowledge and technology, there is only one manner in which compliance may be achieved, that is of no moment. [Citations] *Where the lack of available alternatives is a constraint imposed by present technology and the laws of nature rather than a law of the Water Board specifying design, location, type of construction or particular manner of compliance there is no violation of section 13360.* (*Tahoe-Sierra Preservation Council,* supra at 1438) (Emphasis added)

(3) SWRCB decisions support the City's position

In a very complex factual and scientific matter, the SWRCB found that there was no violation of Water Code §13360 when a Regional Board orders the cessation of contamination of a particular kind for a particular location. In *The Matter Of The Petition Of Citizens For A Better Environment (CBE), et al., United States Fish And Wildlife Service, And City Of San Jose Order No. WQ 90-5*, October 4, 1990 the SWRCB was faced with a petition filed by the City of San Jose and Santa Clara based on Cease and Desist Order No. 89-013.

The Cease and Desist Order (Order) against these cities directed them to cease and desist from discharging waste contrary to the Basin Plan prohibitions against discharges to a particular bay, discharges to dead-end sloughs, and discharges receiving less than 10:1 minimum initial dilution. The Order also specified permissible alternatives for achieving compliance with this directive, including: (1) wetland mitigation; (2) submission of a schedule for constructing a deep-water outfall north of the Dumbarton Bridge; and (3) submission of a schedule for otherwise complying with the discharge prohibitions. The Order further provided that acceptable mitigation projects can consist of: (1) creation or enhancement of salt marsh; (2) reclamation that reduces annual average treatment plant flows to 1970 levels; (3) relocation of the discharge

that results in a projected net increase in salt marsh habitat of 240 acres; or (4) any combination of these options that results in a projected net increase in salt marsh habitat of 240 acres.

San Jose/Santa Clara contended that the Order violated Water Code §13360 because it impermissibly specifies the manner in which the discharger must comply with the order. The SWRCB rejected this contention stating that:

> Order No. 89-013, therefore, is consistent with Water Code Section 13360. This section prohibits a Regional Board from specifying "the design, location, type of construction, or particular manner in which compliance may be had with" an order issued by the Regional Board. Order No. 89-013 does not dictate the manner of compliance with applicable Basin Plan prohibitions, but rather the order allows the dischargers to select the manner of compliance.

(f) The RWQCB has Previously Recognized the Value of the Tennant Well to Remediation of the Subbasin

The City advised the RWQCB on October 30, 2003[40] [Petition Exhibit 13]of its need and plan to operate the Tennant Facility . On May 13, 2003, the RWQCB stated in a letter to Mr. Richard McClure of Olin[41] [Petition Exhibit 10] the following:

> "The Regional Board may require Olin to abate the effects of its discharge of waste. Consequently, the Board may require Olin to provide the City with an alternative water supply or take other action to abate, among other things, the City's inability to use the Tennant Avenue well. The City has suggested that Olin fund wellhead treatment at the Tennant Avenue well. Benefits of this alternative include:
>
> 1. A treatment unit can be purchased and installed quickly and be operational by July 1, 2003, in time to help meet summer water use.
>
> 2. The extraction and treatment of perchlorate contaminated water at the Tennant Avenue well will *reduce the mass of perchlorate leaving the area and will provide partial hydraulic containment of the plume within the well's radius of influence.*" (Emphasis added.)

Prior to bringing the Tennant Well back on line, the City performed certain tests and provided the data to the RWQCB on October 30, 2003.[42] [Petition Exhibit 13]

[40] City's Submission Exhibit 7
[41] City's Submission Exhibit 8
[42] City's Submission Exhibit 7

On August 17, 2004[43] [Petition Exhibit 14] the RWQCB informed the City that:

> "In our opinion, Olin's technical justification does not support Olin's position that Tennant well operation would affect onsite containment and treatment system and draw perchlorate into deeper aquifer zones. After reviewing Olin's June 21, 2004 response, we do not object to Tennant well operation."

In fact, the highlighted statement in the above letter was correct! Likewise, there has been no indication that the operation of the Tennant Well is in any way actually hampering Site cleanup, nor has there been any suggestion that its return to operation has had any negative effect on Olin's "plans" for remediation of Area 1.

(g) Costs to the City of Removing Olin's Perchlorate

As the RWQCB knows, Santa Clara Valley Water District (SCVWD) paid for certain lease costs and other related items for the Tennant Facility for two years.[44] Notwithstanding that, the City has spent more than $300,000 of ratepayer funds on system permitting, operation and maintenance ("O&M"). The City expects that the continuing annual cost of O&M and lease on the equipment will be on the order of $120,000 per year. (Ashcraft Dec ¶10) The number of years that this facility will remain on line is not yet established, but given the general magnitude and concentration of the plume in this location,[45] it is certainly within the realm of reason that a further decade of operation is not out of the question. Assuming this to be the case, the ratepayers of the City would be paying well over $1,200,000 to remove Olin's perchlorate from the Subbasin.

As the RWQCB knows, the City has had to fund its perchlorate removal activities caused by Olin's contamination through a 15% surcharge on its ratepayer's monthly bills. These costs, and thus the surcharge, are likely to continue into the future for a significant time.

(h) There is Valid Evidence that the Tennant Well Should be Considered as Part of the Remediation of Area 1

The CAO seeks to have Olin remediate Area 1. Area 1 includes Tennant. (See December CAO, Figure 2). This area is further described in a letter dated April 26, 2006 to Mr. McClure from the RWQCB.[46] [Petition Exhibit 15] The RWQCB states therein that "Area I extends from the Site to just south of Middle Avenue west of Highway 101 and includes the area with the highest perchlorate concentrations."

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[43] City's Submission Exhibit 9

[44] Ironically, the City pays to the District a huge amount of pump tax and is, therefore, providing the District with money which in turn was merely passed back to the City. In reality, the City was spending its own money.

[45] The Tennant Well concentrations are referred in the Ashcraft Dec ¶14. Further, during all periods of operation the Action/Notification level was 4ppb and then 6ppb. Of course, at this time the MCL is 6ppb.

[46] City Submission Exhibit 13.

Resolution 92-49 states that the RWQCB must:

> "Require the discharger to extend the investigation, and cleanup and abatement, to *any location affected* by the discharge or threatened discharge." (Paragraph II.A.3) (Emphasis added.)

There can be no question that the Tennant Well exists in the location that is "affected by the discharge." Olin must be made to consider this location as part of its remediation. The other parts of Area 1 are distant and downstream from the Tennant Well. By requiring Olin to deal only with the remaining area and not the Tennant location, the RWQCB is telling Olin to geographically leap over the Tennant Well area, and address the remainder of Area 1. Such a direction is clear evidence that the RWQCB not only refuses to "suggest" to Olin that continuing operation of the Tennant Facility should be considered, but is actually steering Olin away from drawing that conclusion. This too, is arbitrary and capricious and is an utter dereliction of the RWQCB's duty to protect the groundwater.

Further, Resolution 92-49 provides that the RWQCB must:

> "Require the discharger to consider the effectiveness, feasibility, and relative costs of applicable alternative methods for investigation, and cleanup and abatement". (Paragraph II.C.)

Use of the Tennant Well is certainly, at the very least, an alternative method for cleanup of part of the off-site perchlorate. Olin has forfeited its right to suggest otherwise.

(i) Notwithstanding Olin's Protestations, Olin Counts on the Tennant Well as Part of its Remediation Strategy

Olin's Revised FS for Priority Zones B and C, 7.3.2 and 7.4.1 outline their perception of what MA would consist of. In both sections, which relate to areas in Area 1 not in the "plume core" (and therefore including the Tennant Well area), a variety of reasons supporting MA are provided. Among the reasons are:

> Reduction in mass due to continued extraction from existing municipal and/or private supply wells. (Olin Revised FS, Pages 7-6 and 7-14). [Petition Exhibit 16]

The only municipal well in the Area 1 portion of Priority Zone C is the Tennant Well. Therefore, it is clear that a significant part of Olin's plan for remediation by MA, includes the Tennant Well's continued removal of the mass of Olin's perchlorate.

(j) The December CAO Indicates the Tennant Well is Hydraulically Controlling Olin's Waste

The December CAO states:

> 8(b) Even thought Olin has not installed off site extraction wells to date to hydraulically contain the plume core, the successful onsite soil

> remediation and the operation of the onsite hydraulic containment system has prevented additional perchlorate from discharging into offsite groundwater.

RWQCB Staff must know, as they predicted in 2003 during the discussion of putting the Tennant Well back into service, that its operation is part of the hydraulic containment system preventing discharge from moving southward. There is no other activity being performed South of Olin's facility that could conceivably impact additional perchlorate discharge from occurring except the Tennant Well.

7. Monitored Attenuation Is Improper

(a) The December CAO Relies on MA

The City strenuously objected in its Submission and testimony at the December Hearing[47] to MA being the only remediation for the areas of the Subbasin outside of Area 1, Zones A and B. MA forces its citizens to live with a degraded source of formerly high quality water[48] for decades while nature slowly takes its course. Furthermore, the RWQCB has not offered any sustainable justification supporting the selection of MA as the only remediation alternative for any portion of Olin's plume outside of Subbasin Area 1, Zones A and B. Mr. Hernandez stated at the December Hearing, in response to Chairman Young's question regarding whether monitoring data shows evidence to support monitored attenuation, that:

> Based on our review of groundwater monitoring data from the domestic supply wells, there is a decreasing trend. (Transcript, Page 24, Lines 14-16).

However, there is no clear decreasing trend in perchlorate concentrations shown by the domestic well data, as will be explained below. RWQCB has conducted no independent analysis of perchlorate trends from either domestic or monitoring wells, nor has the RWQCB ordered Olin to conduct trend analysis on Olin's monitoring well data, even though, by Olin's own criteria 21 monitoring wells had sufficient data of suitable quality for such trend analysis in both the first and second quarters of 2007. This fact was raised to RWQCB by the City in the WPK comment letters dated May 18, 2007 [Petition Exhibit 17] and September 6, 2007 [Petition Exhibit 18], yet RWQCB did not act on this information.

(b) The RWQCB's Staff Report Asserting that MA is Working is at Best Questionable and therefore Does Not Support the December CAO

RWQCB and Olin support the MA approach will rapidly attenuate downgradient from areas of active remedial solutions. However, no technical basis to support this highly optimistic forecast is presented. The City noted it was patently clear that high levels of perchlorate in Zone I groundwater persist downgradient of the active on-Site soil and groundwater remediation that has been ongoing for nearly three years (WPK Sept. 6, 2007 [Petition Exhibit 18]). This condition is clearly shown in all of Olin's perchlorate plume maps for the intermediate aquifer and contradicts the RWQCB's and Olin's position that rapid perchlorate attenuation is occurring downgradient of active remediation. Nonetheless, as further evidence that MA is not working, and therefore should not be a viable candidate as a remediation technique, Olin's recently filed Third Quarter 2007 Monitoring Report (Section 3.2.2) includes the table below:

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[47] See Transcript of December 7, 2007 Hearing – generally testimony by Steve Tate, Mayor of the City of Morgan Hill (commencing on Page 114, Line 5 to Page 118, Line 20); Mr. Ed Tewes, City Manager of the City of Morgan Hill (commencing on Page 129, Line 3 to Page 136, Line 12) and Counsel for City of Morgan Hill (commencing on Page 123, Line 2 to Page 129, Line 1). Further objections were submitted into the record by letter and testimony by Assemblyman John Laird and Senator Able Maldonado, the Santa Clara Valley Water District, the County of Santa Clara, the City of Gilroy, the Perchlorate Community Action Group and the Perchlorate Working Group.

[48] The RWQCB has found, as referenced in the 2005 CAO, that Olin's perchlorate "degraded high quality waters of the state in violation of this objective." (Paragraphs 5, 33).

Trend	All Wells (281)	> PHG Wells (37)
Increasing/Probably Increasing	13%	11%
Stable/No Trend	70%	65%
Decreasing/Probably Decreasing	16%	24%

This table shows the results of the statistical analysis of concentration trends in domestic wells, evaluated using the Mann-Kendall method which is widely applied and approved by RWQCB. The data in this table show that 83% of the domestic wells evaluated by Olin using the Mann-Kendall method show either stable or increasing levels of perchlorate contamination. This is in direct contradiction to Mr. Hernandez's statement cited above.

As previously noted by WPK in its comment letter dated January 19, 2007 [Petition Exhibit 19] on the December 6, 2006 revised feasibility study (FS) report (Revised FS; MACTEC 2006; Appendix C) and its comment letter dated September 6, 2007 on Olin Llagas Subbasin Cleanup Workplan of June 15, 2007 (the Cleanup Workplan; MACTEC 2007), the Mann-Kendall evaluation of concentration trends in domestic wells indicated that more than two-thirds of domestic wells did not show a decreasing trend in perchlorate concentrations. As noted above, the most recent (third quarter 2007) Mann-Kendall trend evaluation shows that the percentage of domestic wells that do NOT show a decreasing trend has gone up to 83% from the two-thirds noted in the above comment letters. Consequently, even though RWQCB has been aware of these findings for nearly a year, they still come to the incorrect conclusion that there is a decreasing trend in perchlorate concentrations in domestic wells.

The City's review of the Subbasin Cleanup Feasibility Study – Revised submitted to the RWQCB[49], shows that Olin's reliance on dilution and dispersion as dominant mechanisms allowing the feasibility of the MA option is based on optimistic speculation alone. Olin counts on appreciable dilution from anthropogenic recharge from the Madrone, San Pedro and other recharge ponds operated by the SCVWD.[50] For example, with respect to reduction of perchlorate mass flux between Area I and Area II, Olin states that dilution of 40 to 60 % imported water between Area I and II is anticipated, and thus the "additional source of water from the percolation ponds results in a reduction in perchlorate concentration" (FS Report p 3.14). However, the map of percentage pond recharge water in the Intermediate Aquifer (FS Report Figure 3.9) clearly shows that the calculated percentage of pond water in the vicinity of the perchlorate plume in Area I is in the range of 5 to 30 %, indicating much less potential for dilution by pond recharge water in the portion of Area I occupied by the perchlorate plume, and particularly on the western flank of the plume.

[49] City Submission (WPK letter dated January 19, 2007) Exhibit 20

[50] Again, ironically, this recharge is paid for by the City through its pump tax payments and thus Olin is again relying on the City to cleanup Olin's pollution.

As further noted in the City's review, even this magnitude of dilution is optimistic for two main reasons, as noted in the WPK comment letter of January 19, 2007 on the Revised FS:

- The main SCVWD recharge ponds are located well to the east of the Olin site and the Area I plume, and the dominant flow direction in the Shallow and Intermediate aquifers in this area is to the southeast, as shown in FS Report figures 3.2 and 3.3. Consequently, considering the likely dominance of advection as a plume migration mechanism in the Subbasin, and the probable pathlines or "streamtubes" to be followed by the recharge water, it is unlikely that significant transverse lateral mixing of the recharge water and the Area I plume would occur.

- Evaluation of concentration trends in monitoring wells, discussed in FS Report Appendix C, indicates that over two-thirds of wells do not show a decreasing trend in perchlorate concentrations. Consequently, dilution and dispersion are not actively reducing concentrations. The development of a 9-mile long plume from the Olin site suggests that advection is the dominant transport mechanism, and dilution and dispersion are not effective mechanisms for long-term reduction of perchlorate concentrations.

Thus, the City sees no evidence that could support the RWQCB to allow Olin to rely on MA.

(c) The RWQCB's Staff Report Asserting that MA is Working in One Place Does not mean it is Working Everywhere

The Staff Report states in support of MA that:

> Recent perchlorate concentration data show consistent declines in shallow aquifer perchlorate concentrations in both onsite and in Area 1 wells. We believe these decreases in perchlorate concentrations are due to the successful onsite soil cleanup and the operation of the onsite groundwater treatment system. Based on these results, additional hydraulic control measures (south of the Facility) are not deemed necessary at this time. (Staff Report p 3)

Further, the Staff Report states:

> Monitored attenuation shall apply to all portions of the Llagas Subbasin outside of the plume core (within the shallow, intermediate and deep aquifer zones), including those portions of the deep aquifer zone immediately east and northeast of the Facility. (Staff Report pg. 4)

The sole rationale in support of MA is that it is working in the shallow aquifer and so it should work elsewhere. This rationale is without factual and analytical support and as such is arbitrary and capricious.

(i) The purported decreases in the shallow aquifer, if they exist, have no bearing on the intermediate and deep aquifer

There are several aquifers which have been investigated in this matter. Olin's Feasibility Study designates seven, all of which do not exist in the areas where its contamination exists. The several aquifers studied by Olin have different geologic origins, depths, flow rates and hydraulic conductivity. The alleged decreases in the shallow aquifer do not have any rational relationship scientifically so that the decrease in the shallow aquifer can serve as a model for others. As a matter of fact, Olin has recently reported in their First Quarter 2007 report that new, historically high perchlorate concentrations were observed in first quarter 2007 in five Upper Deep Aquifer monitoring wells[51]; eight Middle Deep Aquifer zone monitoring wells[52] ,plus northeast piezometert[53]; and two Lower Deep Aquifer zone monitoring wells[54] as described in detail in the WPK comment letter dated May 18, 2007 [Petition Exhibit 17] on the First Quarter 2007 Groundwater Monitoring Report (April 30, 2007).

Given this disparity of results, there is no basis for the assumptions made in the Staff Report.

(ii) The Tennant Well is an off site Area 1 well and its perchlorate levels are rising.

Not mentioned in the Staff Report or in any of the Response to Comments by Staff was any acknowledgement of the fact that the Tennant Well's perchlorate levels are rising and are in excess of the MCL. This well has a screen length of 190ft to 420ft, and thus takes water from both the intermediate and deep aquifers.[55] [Petition Exhibit 20]

Therefore, the decree that "[m]onitored attenuation shall apply to all portions of the Llagas Subbasin outside of the plume core (within the shallow, intermediate and deep aquifer zones)" noted in the Staff Report simply does not apply to the Tennant Well. The Tennant Well is screened from 190 to 420 feet below surface, and thus is screened mainly in the deep aquifer (below about 200 feet) and the lower ten feet of the intermediate aquifer (from 190 to 200 feet).

(iii) MA for the Northeast Deep Aquifer is Not Supported

The December CAO fails to acknowledge or address the need for Olin to cleanup the perchlorate in the Deep Aquifer in the area northeast of the Site, the origin of which is well documented (for at least eight consecutive quarters by Olin's groundwater monitoring data) to be the Olin Site. As noted in the September 6, 2007 WPK comment on the Cleanup Workplan (June 15, 2007), for example, none of the Priority Zone B or C MA performance monitoring wells listed in Table 4.1 of the June 15, 2007 Cleanup Workplan (MACTEC 2007) in either the intermediate or Deep Aquifer zones is located within 2,500 feet south of the Site, let alone north or east of the Olin Site. Moreover, as shown in the Cleanup Workplan Figure 4.4, the nearest

[51] MP-16-229, MP-21-278, MP-52-273, MW-04B, MW-53-264
[52] MW-16-363, MW-52-347, MW-21-295, MW-04C, MW-05C
[53] PZ-01-333 (4.6 ug/L), PZ-02-315 (4.7 ug/L) and PZ-04-335 (8.5 ug/L
[54] (MW-52-403, MW-54-400
[55] City's Submission Exhibit 10

Deep Aquifer zone MA performance monitoring well is 6,700 feet south of the Olin Site, at MP-21/MW-21.

The December CAO does not require Olin to address this deficiency in any specific manner. The December CAO should address cleanup of all impacted aquifers in Priority Zones B and C east, north, and northeast of the Olin Site, which it fails to do; and, at the very least, require that Olin provide a detailed MA performance monitoring program for these areas, as well as other areas, in closer proximity to the Olin site than 2,500 feet away, and definitely closer than 6,700 feet in the Deep Aquifer zone.

(d) Monitored Attenuation Does Not Remove Perchlorate to Background

Member Shallcross sought clarification from Staff as to just what MA does.

> MR. SHALLCROSS: Okay. But the monitored attenuation process, if it is a process, doesn't actually take any perchlorate out.
>
> MS. TRYON: Right. Correct. It is essentially monitoring to make sure --
>
> MR. SHALLCROSS: It's just watching and seeing if it goes up or down, right? (Transcript, Page 27, Lines 13-18).

> MR. SHALLCROSS: Okay. So that has to do with the monitoring of the wells, well monitoring; it has nothing to do with cleaning up the water.
>
> MS. TRYON: Yeah, the actual monitored attenuation process is not like pump and treat where you're taking it out of the ground. (Transcript, Page 29, Lines 1-6).

(e) Reference to Requirements of the USEPA

In the Response to Comments, Staff indicated that the MA would be implemented in accordance with certain USEPA requirements. In the December CAO RWQCB Staff formerly inserted these references into the December CAO:

> Due to the uncertainties concerning the long-term effectiveness and the predicted timeframes estimated for groundwater cleanup, the Discharger shall implement the monitored attenuation remedy component in strict accordance with USEPA's guidance document concerning the use of monitored attenuation at groundwater cleanup sites. [Footnote cites to: United States Environmental Protection Agency. OSWER Directive Initiation Request, 'Use of Monitored Natural Attenuation at Superfund. RCRA Corrective Action, and Underground Storage Tank Sites.' April 24,1999.] (December CAO paragraph D).

(i) The OSWER Directive does not support MA for the Subbasin

The EPA sets forth three main criteria for the use of MA[56] in OSWER Directive Initiation Request, 'Use of Monitored Natural Attenuation at Superfund. RCRA Corrective Action, and Underground Storage Tank Sites.' April, 1999 (MA Policy). [Petition Exhibit 21] In summary, the MA Policy states that:

> MA may be appropriate "for specific, well-documented site circumstances *where its use meets* the applicable statutory and *regulatory requirements*." (MA Policy, Pages 1-2, Emphasis added).
>
> MA "should be selected only where it meets all relevant remedy selection criteria, and where it will meet site remediation objectives *within a timeframe that is reasonable compared to that offered by other methods*." (MA Policy, Page 2, Emphasis added.)
>
> That the selection of MA as a remediation method should be *"supported by detailed site-specific information that demonstrates the efficacy of this remediation approach."* (MA Policy, Page 2, Emphasis added.)
>
> That MA will *"only be appropriate for sites that have a low potential for contaminant migration."* (MA Policy, Page 3, Emphasis added.)
>
> MA is preferred when " processes for site remediation... *degrade or destroy contaminants*." (MA Policy, Page 3, Emphasis added 3).

The City submits that based on the record, MA can not be supported[57], even conditionally, because:

- The central purpose of the CAO's remediation objectives are set out in the SWRCB policy on non-degradation (Resolution 68-16 and 92-49).
- There has been no comparison performed of the reasonableness of meeting the remediation objectives within a timeframe offered by more active remediation.
- The claim by the RWQCB that MA is working, or will work, is not supported by the data.[58]
- As evidenced by the continued spread of this 9-10 mile plume, and the statement by the RWQCB that over the next few years

[56] The USEPA refers to monitored attenuation as monitored natural attenuation ("MNA"). For the purpose of simplicity the City will refer to the process merely as MA whether citing to the MA Policy or otherwise.
[57] See Worley Parsons Komex letter dated December 3, 2007 attached to the City's Supplemental Submission as Exhibit 6, section 1(a). [Petition Exhibit 22], Transcript, Page 125, Line 10 to Page 126, Line 2).
[58] See City's Supplemental Submission Exhibit 6, Sections 1(a) and 1(b). [Petition Exhibit 22]

during which Olin will do further studies leading up to active remediation in Area 1, the plume will undoubtedly spread, MA is certainly not appropriate.

- The proposed MA relies entirely on dilution and dispersion of the perchlorate plume due to mixing with uncontaminated groundwater.

- The December CAO does not address active cleanup of all impacted aquifers in Priority Zones B and C east, north and northeast of the Olin site.[59]

In essence, the RWQCB is using MA as a default remedy for the entire basin other than the very limited zones in Area I. This too is exactly the opposite of the guidance offered by the MA Policy. ("MNA should not be considered a default or presumptive remedy at any contaminated site." MA Policy Page 11).

(f) It is Clear that RWQCB Staff Does Not Know if MA Will Actually Work in a Reasonable Time Span

As noted above in discussion of the MA Policy, a time frame for MA is a critical issue. If the time frame is unreasonably long, MA would likely not be permitted. Therefore, some concept of the rate of attenuation should be considered before it is allowed. Based on the Response to Comments, it would appear to be that RWQCB does not know how long such a time frame is regarding Olin's contamination. Note the following statements:

> Our approval of the MA remedy component continues to be conditional because our evaluation of the long-term effectiveness of MA and the predicted timeframes estimated for groundwater cleanup, as addressed in Olin's groundwater model, *is not complete*. (Response to Comment by the City, Item 13) (Emphasis added)

> Water Board staff believes it is *premature* to know whether it will be technically and economically feasible to cleanup perchlorate impacted groundwater in a reasonable time within each individual aquifer zone to levels below the MCL. (Response to Comments by Mr. Leekema, Item 2) (Emphasis added)

> As all remaining wells with perchlorate greater than the drinking water standard are within about 2 µg/L of the MCL, we expect that attenuation to less than the MCL will be achievable *relatively soon*. We will monitor perchlorate concentrations outside of Priority Zone A. (Response to Comments by SCVWD, Item 1). (Emphasis added)

[59] See City's Supplemental Submission Exhibit 6, Section 1(c). [Petition Exhibit 22]

(g) MA is Being Based, in Part, on a Groundwater Flow and Transport Model that has not even been Validated

(i) Background regarding the model

(1) What RWQCB Staff is relying on

The RWQCB Staff is basing its conditional support of MA on Olin's groundwater model.

> Our approval of the MA remedy component continues to be conditional because our evaluation of the long-term effectiveness of MA and the predicted timeframes estimated for groundwater cleanup, as addressed in Olin's groundwater model, is not complete. (Response to Comment by the City, Item 13).

Further RWQCB Staff states:

> Further, since Olin will use modeling results as a guide to initiate the required groundwater remediation activities, Central Coast Water Board staff has contracted an independent, third-party consultant (California Department of Toxic Substances Control) to review and evaluate the numerical groundwater flow and mass transport model that is used to simulate the perchlorate distribution, predict the decreases in perchlorate concentrations over time, remediation time frames, and evaluate the need for additional characterization activities within certain areas of the Subbasin, particularly in the deep aquifer zone. (Response to Comment by the City, Item 13).

(2) Background information regarding the issues with Olin's Model

As part of Olin's Feasibility Study and other reports, it based its plans and suggestions on a numerical ground water model. The City sought on several occasions to have the RWQCB obtain the model and permit the City to review it. Counsel for the City had several discussions and email exchanges with Ms. Okun on this subject. The RWQCB sent Olin a Water Code §13267 order to produce the model. Olin refused taking the position that the model was proprietary, contained trade secrets and was protected by the attorney work product privilege.

At some point in the negotiations Olin offered to allow only the RWQCB to view certain critical data files upon the signing of a confidentiality agreement, but the RWQCB rightly refused. In Ms. Okun's letter to Mr. Randall Visser, counsel for Olin, dated October 3, 2007 she states: [Petition Exhibit 23]

> Central Coast Water Board staff is unwilling to conduct its regulatory cleanup programs in a manner that denies interested stakeholders access to information on which the Central Coast Water Board relies in making decisions about a cleanup. Allowing the Central Coast Water Board access to the data, but not possession of it, does not address this concern.

> Unless Olin provides an unrestricted copy of the electronic input files, Central Coast Water Board staff will not rely on the model results to assess background concentrations, plume containment or feasibility of remedial alternative, including monitored attenuation (MA). [60]

This issue was further confounded by paragraph 49 of the November 30 CAO which states:

> The Discharger may not rely on any groundwater modeling unless the Discharger provides the Water Board with a legal copy of the modeling software, electronic input data files, assumptions used, model calibration information and all other data or information used in the model upon request of the Executive Officer. All such files, assumptions, information and data (other than commercial software programs) shall become a part of the administrative record for this Facility and will be available to the public in any proceeding regarding enforcement or revisions of this Order.

Now, however, it is clear that the RWQCB was not being up front about Olin's disclosure of the model in the days before the December Hearing. In the December Hearing, Ms Tryon (RWQCB) stated:

> MS. TRYON: In terms of monitored attenuation determining whether it's an effective remedy, it's not only going to be monitoring which wells are above 6.0, how many.[Sic] It will be a spatial evaluation, temporal and trend analysis. There's going to be several methods for evaluating that. *It just hasn't been worked out completely because we still need to review that carefully.*
>
> And in addition to that, we are reviewing Olin's groundwater fill [sic] and transport model currently. *That's ultimately going to be evaluating how reasonable the model is at predicting time frames. And that's ongoing.* (Transcript, Page 158, Line 23 to Page 159, Line 10) (Emphasis added)

And yet, somehow miraculously, given that the Chair refused to allow further comments on "new issues", immediately before the hearing the City was advised that Olin will allow review of its model. Counsel for the City received a letter addressed to Counsel for Olin on December 6, 2007 (the day before the December Hearing) which was dated December 3, 2007 [Petition Exhibit 23]. This letter, from Ms. Okun (now apparently Counsel to the SWRCB), confirms the release of the data to the RWQCB on October 24, 2007 and indicating that Olin would like notice if anyone requests the data. Up until December 6, 2007 the City was kept in the dark about the Model and was left to believe Olin was not permitting access to anyone.[61]

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[60] A model report was provided by Olin which purported to describe certain features of the model. The City's consultant, Dr. Mark Trudell, reviewed it and found the report insufficient to adequately evaluate the model and that it pointed to the likelihood of many major deficiencies. This review was attached by Ms. Okun to her letter.

[61] The timing is certainly suspect to say the very least. It appears that Ms. Tryon's statement supports the fact that the RWQCB was "sitting" on this information for several months before the hearing. In order to deal properly with

Notwithstanding this apparent lapse of judgment as to the degree of openness that best serves the public, the more critical issue here is that while the RWQCB was relying on a Model for the implementation of the December CAO it has yet to even validate that the Model is accurate in any way. As this Board knows, models can be subject to a wide variety of ills and assumptions which call into question their usefulness. That the RWQCB is basing its cleanup on a yet unproven model is arbitrary and capricious.

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the MA issue the public had the right to have access to the model to see if it was valid. But the RWQCB apparently thought otherwise.

8. Cleanup Must be to Background

(a) Resolutions

(1) Resolution 68-16

The State Water Resources Control Board (SWRCB) issued Resolution 68-16 commonly referred to as setting forth the State's "Non-degradation" policy. In pertinent part it states:

> WHEREAS the quality of some waters of the State is higher than that established by the adopted policies and it is the intent and purpose of this Board that such higher quality shall be maintained to the maximum extent possible consistent with the declaration of the Legislature;
>
> NOW, THEREFORE, BE IT RESOLVED:
>
> 1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water..."

(2) Resolution 92-49

According to Resolution 92-49, Water Code §13304 "authorizes Regional Water Boards to require complete cleanup of all waste discharged and restoration of affected water to background[62] conditions (i.e., the water quality that existed before the discharge)."

(b) The 2005 CAO Called for Determination of Background

In issuing the 2005 CAO, the RWQCB recognized the need to have a cleanup to background level and required Olin to deal with this issue:

> The appropriate cleanup standard for perchlorate, as required by State Board Resolution No. 92-49, is background or the best water quality that is reasonable if background levels of water quality cannot be restored...(Paragraph 6)
>
> State Board Resolution No. 92-49 requires Dischargers to "cleanup and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels of water quality cannot be restored, considering all demands being made and to be made on those waters and

[62] Background levels can be determined under California Code of Regulations [CCR] Title 23, Division 3, Chapter 15 Sections 2550.4 and 2550.7, or CCR Title 27, Division 2, Subdivision 1, Chapter 3, Subchapter 3, Article 1 Section 20400.

the total values involved, beneficial and detrimental, economic and social, tangible and intangible. (Paragraph 34.)[63]

(c) A very confusing record

RWQCB Staff has created a very confusing record on background and cleanup levels. It is certainly far from clear at this time what the cleanup level is and what cleanup level applies to what area. The confusion comes from statements made by RWQCB Staff in the Response to Comments, the Proposed CAO, the November 30 CAO and its final position in regard to the December CAO. The City sets forth below the relevant issues which have led to the current situation of uncertainty.

(i) History

In and about 2003 the Santa Clara Valley Water District sought and received a grant from the EPA to test perchlorate within its territory. For years, because this study was underway, the RWQCB permitted Olin to escape the need to determine what background was. The record is replete with their statements, including the latest in the RWQCB's Staff Response to Comments. However the person in charge of the Study stated on May 11, 2006[64] [Petition Exhibit 24]:

> The Study will attempt to distinguish different anthropogenic sources of perchlorate; however, there are a number of factors that could complicate the interpretation of forensic data to allow definitive determination of *one anthropogenic source vs. another*" (Emphasis added)

In their November 1, 2007 Comment Letter[65] [Petition Exhibit 25] to the RWQCB on the Proposed CAO, the SCVWD reiterates this same position again. It states:

> The objective of the District's study is to use state-of the- practice techniques to provide the District with determinations of the background concentration of perchlorate in the Llagas groundwater subbasin, and whether forensic environmental geochemistry techniques can reliably distinguish natural from man-made source(s) of perchlorate found in the Llagas groundwater Subbasin.

In other words, one of key purposes of the Study is to see if the techniques actually work.

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[63] Olin has not yet determined background perchlorate levels in the Llagas Subbasin, by either the process for determination of background concentration of contaminants under California Code of Regulations [CCR] Title 23. Division 3, Chapter 15 Sections 2550.4 and 2550.7 or CCR Title 27, Division 2, Subdivision 1, Chapter 3, Subchapter 3, Article 1 Section 20400 as required by the RWQCB (2007) in their letter of March 29, 2007 commenting on Olin's December 6, 2006 Revised FS report. Resolution 92-49 in fact requires that background concentrations be determined in accordance with the above methods if a cleanup level greater than background is proposed.

[64] City's Submission Exhibit 17

[65] City's Submission Exhibit 18

(ii) A free pass for Olin

Remarkably, RWQCB Staff's comments appear to continue to actually take pity on Olin by suggesting that since the Study may be done in the Spring of '08, it is "not practical or reasonable to require Olin to conduct the forensic study at this time." (Response to Comments by SCVWD, Item 4). Despite their recognition that "the Water District's forensic investigation may not provide definitive results." (Response to Comments by SCVWD, Item 4) and that "cleanup to background levels is high priority" (Response to Comments by the City, Item, 2) the RWQCB continues to provide Olin with a reason to do nothing by saying:

> Please note that Olin can provide information that may redefine background concentrations at any time and we will have to consider it. (Response to Comment by PCAG, Item 5)

Olin has not been asked to perform this work and if it does, there is a chance the RWQCB Staff might actually have to consider what the background really is. The City asserts that there is no legal impediment which prevents the RWQCB from requiring Olin to perform the analysis now. Indeed, such a request could be done either through a CAO or through a Water Code §13267 order. Yet years of stalling have occurred without a shred of supporting rationale being supplied by RWQCB Staff as to why this simple task has not been completed.

While the RWQCB has delayed, RWQCB Staff has stated in their Response to Comments that it is too late to have Olin perform this work.

> Considering that the results of the forensic investigation will be available in a few months, Water Board staff believes it is not practical or reasonable to require Olin to conduct the forensic study at this time. (Response to Comment by SCVWD, Item 4).

Since the RWQCB has not required Olin to perform the necessary tasks, RWQCB's conclusion that it is too late to have Olin perform may be correct, but only because of the RWQCB's own improper inaction.

(iii) What is the cleanup level?

(1) The Proposed CAO Paragraph 41

In the Proposed CAO, paragraph 18[66] was entitled "Cleanup Level" and stated it was premature to determine background, and that the community should wait until the Study was done. However, the November 30 CAO and the December CAO had no paragraph labeled "Cleanup Level," but they do have a paragraph now labeled "Background Level"(Paragraph 41) which states:

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[66] 18. Cleanup Level: The Central Coast Water Board has determined it is not reasonable at this time to establish a final cleanup level for the Llagas Subbasin. As additional data are collected and evaluated, including data associated with the Water District's forensic chemistry study (for background determination purposes) and ongoing performance monitoring data, and as the Central Coast Water Board thoroughly evaluates the efficacy of the selected remediation strategy, establishing an alternative cleanup level greater than background will be reevaluated.

> Until the Discharger substantiates its assertion that a measurable background level of perchlorate exists within the entire Llagas Subbasin or discrete areas within the Llagas Subbasin, the Central Coast Water Board will continue to find that the background perchlorate level in groundwater (for the majority of the Llagas Subbasin) is less than the method detection limit (MDL). In accordance with State Board Resolution No. 92-49, the background concentration of perchlorate in groundwater within the Llagas Subbasin must be the level of perchlorate that would exist in groundwater without regard to any discharges from the facility.

It was not clear what the phrase "will continue to find that the background perchlorate level in groundwater (for the majority of the Llagas Subbasin) is less than the method detection limit (MDL)" means nor is it clear where the areas outside of the "majority of the Llagas Subbasin" would be. Such vagueness renders the CAO highly questionable. The City asked for clarification. No clarification was forthcoming.

The City's Submission suggested to the RWQCB that it would like to be optimistic, and believe this vague language means that the RWQCB Staff is taking the position that there is a background level at 1.4ppb (the MDL) and that the RWQCB will continue to assert this is the background level until Olin decides, on its own (if it feels like it), to challenge that level. Further, the City's Submission asked that this statement, having no reference to the Study, be clarified to mean that the RWQCB Staff has determined that waiting for the Study is not in the best interests of the Subbasin. This too was not forthcoming

(2) The December CAO on Cleanup level

Paragraph 44 of the December CAO states:

> The Central Coast Water Board has determined it is not reasonable at this time to establish a cleanup level that is less stringent than background for the Llagas Subbasin. As additional data are collected and evaluated, including data associated with the Water District's forensic chemistry study (for background determination purposes) and ongoing performance monitoring data, and as the Central Coast Water Board thoroughly evaluates the efficacy of the selected remediation strategy, establishing an alternative cleanup level less stringent than background will be reevaluated.

In this paragraph, RWQCB Staff appears to be stating that there are no data to support a cleanup above 1.4ppb. In the City Submission and orally at the December Hearing, the City heartily agreed that this was the case. Therefore, according to 92-49 it should not permit cleanup to a level higher than background, but that is exactly what the RWQCB does in direct contradiction of this important SWRCB policy.

Instead, the December CAO Paragraph D requires Olin to remediate to a higher level of contamination. Paragraph D states:

> The Discharger shall proceed with immediate implementation of a phased groundwater -cleanup approach within the Llagas Subbasin, as approved, conditioned and clarified in the Central Coast Water Board's upcoming response letter concerning Olin's June 15, 2007, Llagas Subbasin Cleanup Work Plan, Olin/Standard Fusee Site, Morgan Hill, California (Cleanup Work Plan), and herein.

The RWQCB, through its December CAO, is permitting Olin to remediate to only 6ppb. This cleanup level is contrary to 92-49, and is provided without any reasonable support that would allow this less stringent cleanup. While a level of 6ppb may be an issue for replacement water supplies as noted in SWRCB's ruling in the Matter of the Petitions of Olin Corporation And Standard Fusee Corporation For Cleanup And Abatement Order No. R3-2004-0101 - SWRCB/OCC FILE A-1654 and A-1654(a), it does not apply to groundwater cleanup.

> This order applies only to requirements for interim water replacement and not to groundwater or soil cleanup levels required under State Water Board Resolution 92-49.

Further, Paragraph 45 of the December CAO stated:

> This Order requires the Discharger to implement active remediation within the highest concentration areas expeditiously. The Discharger is required to proceed with immediate implementation of groundwater cleanup (hydraulic containment and treatment) with the cleanup objective (goal) of achieving the background concentration within each individual aquifer zone and those portions of the Llagas Subbasin impacted by discharges from the Facility.

The City maintained in the City Submission and other oral testimony that actively remediating other areas of the plume is required, but that aside, it would appear that RWQCB is stating that Olin must cleanup the "highest concentration areas" to 1.4pbb which again, contradicts their allowance of cleanup to 6ppb.

Background is deemed to be 1.4ppb. There is no reason provided for a less stringent cleanup and using 6ppb is incorrect. A cleanup level at the assumed background level, not the MCL, is mandated.[67]

(d) The RWQCB Must Require Olin to Cleanup to Background Level, not 6ppb

Up to this time, the RWQCB has shied away from setting an actual background level that is tied to cleanup. Instead, it is allowing Olin to cleanup (in Area 1) to 6ppb. The City submits that this is an abrogation of the RWQCB's statutory obligation.

The background level is established by the RWQCB.

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[67] Commented on by City at the December Hearing: Transcript, Page 125, Lines 4-13; Page 134, Lines 20-23.

> (c) For a corrective action program, the regional board *shall* establish a concentration limit for a constituent of concern that is greater than the background value of that constituent only if the regional board finds that it is technologically or economically infeasible to achieve the background value for that constituent and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the concentration limit greater than background is not exceeded. 23 CCR §2550.4 (Emphasis added)

That provision could not be clearer in regard to what the RWQCB is supposed to do.

This is not a required exercise that is done merely to check a box on the list of things to do. The Proposed CAO is a corrective action program. The *RWQCB must set a background level that is meaningful for the purpose of corrective action, i.e. removing the contaminant that is there now but was not there before.* It is flatly an abuse of discretion to set a background level presumptively and then, with no substantiation, determine it can be ignored in so far as cleanup is concerned. The *RWQCB must set a background level and must employ that level as a standard for cleanup in all parts of the Subbasin*.

While the CCR permits the setting of higher levels, there is nothing in the record of this matter that demonstrates that the RWQCB has made a determination about technological or economic infeasibility justifying higher levels. It is simply unlawful and improper for the RWQCB to act in such a manner which is contrary to its authority under the law. It is an abuse of discretion to exercise discretion without regard to the governing law. *Sierra Club v. State Board of Forestry*, (1994) 7 Cal.4th 1215, 1236. (State Board's failure to proceed as required by the Forest Practice Act was a prejudicial abuse of discretion.)

(e) It is Feasible to Actively Remediate Area I, Zone B and C to Background

The technical and economic feasibility of cleanup to background in Area I, Zone B and C was addressed in the WPK (2007) comment letter to the RWQCB on the Revised FS dated January 19, 2007 [Petition Exhibit 19]. The key points are summarized as follows:

1. 92-49 specifies the conditions under which a cleanup level other than background can be proposed, as summarized in the RWQCB (2006) October 6, 2006 comment letter on Olin's June 30, 2006 FS Report (MACTEC 2006). [Petition Exhibit 26] A key condition is that the proposed cleanup level be the lowest concentration technically and economically achievable. Olin's Revised FS showed that cleanup to less than 2ppb was both technically and economically feasible.

2. In scoring of remedial alternatives, the WPK January 19, 2007 comment letter [Petition Exhibit 19] detailed numerous scoring inconsistencies by Olin in our comment letter on Olin's Revised FS report. That comment letter included a re-scoring of alternatives that addressed the identified inconsistencies in the Revised FS Report Tables 7.1 and 7.2 and showed that the Groundwater Extraction/Treatment alternative ranked

higher than the MA Alternative 2 for both Priority Zones B and C. Moreover, RWQCB conducted their own re-scoring of remedial alternatives in their March 29, 2007 comment letter [Petition Exhibit 27] on the Revised FS Report. The RWQCB in that letter concluded that

> Based on our own revised scoring, the revised scoring shows that Alternative 3 (Groundwater Extraction and Treatment) ranks higher than Alternative 2 (MA) for both Priority Zones B and C.

Given the scoring of remedial alternatives by both parties, it is very clear that the preferred remedial alternative for both Priority Zones B and C is groundwater extraction and treatment, not MA, as scored by Olin. However, in spite of the RWQCB's own finding, it has permitted Olin to proceed with the proposed MA option for Priority Zones C.

3. Costs presented in Appendix D of the Revised FS were not estimated in a manner consistent with guidance published by the USEPA (2000).[68] The document was published in July 2000 and presents USEPA policy on use of a discount rate for net present value (NPV) calculations. The NPV discount rate recommended by the USEPA is 7 percent, which has been adjusted to eliminate the effect of expected inflation. The Revised FS Report used an escalation rate of 3 percent and a NPV discount rate of 5 percent. As a result, the costs presented in the Revised FS Report are significantly higher than the USEPA would accept. Costs presented in Appendix D of the Revised FS also applied higher percentages for engineering services than USEPA recommends.

The Revised FS applies a total percentage to the remedial alternative capital cost of 45% for the design, construction management, and project management services. The USEPA recommends a total percentage of 17% for the services. Costs presented in Appendix D of the Revised FS also used the worst case scenario for the timing of the project to achieve cleanup levels, not considering that portions of the aquifers would cleanup sooner than others. In the case where portions of the aquifer reach the cleanup goal sooner than others, fewer wells pumping at a much reduced cost would be required. These various costing errors and inconsistencies by Olin result in cost estimates that are excessive, giving an unfavorable representation of the economic feasibility of the groundwater extraction and treatment options for Priority Zones B and C that is invalid.

Consequently, the Groundwater Extraction/Treatment alternative not only is the preferred option on a technical basis, it is economically feasible as well.

[68] "A Guide to Developing and Documenting Cost Estimates During the Feasibility Study."

9. Conclusion

For decades, Olin's facility in Morgan Hill discharged perchlorate into the groundwater that serves as the life blood of not only the City, but a major part of the County of Santa Clara as well. This contamination has infected and degraded the high quality of water in the Subbasin. Seven years ago, the discovery of its existence by the RWQCB brought some hope that this community would have the quality of its drinking water restored. Unfortunately, the RWQCB has not only failed to take proper and timely action, but has acted improperly, in contradiction to the law and in an arbitrary and caprious manner as set forth herein. It is time that the SWRCB correct these wrongs and send a strong message that it is not "business as usual", but rather that it expects the RWQCB to act as a bastion of strength and propriety to appropriately guard California's water resources from waste and ruin.

Based on the above, the City asserts that the SWRCB must issue an Order

> Directing the RWQCB to require Olin to provide replacement water to the City under Water Code § 13304 regarding the Tennant Well.
>
> Directing the RWQCB to require Olin to take all reasonable steps to protect the Tennant Well from being impacted by the contamination it discharged into the groundwater.
>
> Directing the RWQCB to require Olin to employ the Tennant Well as part of the remediation of Area 1.
>
> Directing the RWQCB to require Olin to remiedate the Subbasin to background, and to rescind any directive to Olin that permits a cleanup to 6ppb anywhere in the Subbasin.
>
> Directing the RWQCB to resend any part of the December CAO that permits Monitored Attenuation

Attachment A

At a minimum, the record consists of the following:

Regional Water Quality Control Board's (RWQCB's) May 13, 2003 letter to Olin Corporation ("Olin"), the RWQCB directed Olin to provide the RWQCB with proposals for providing wellhead treatment at the Tennant Well

September 3, 2003 letter to RWQCB from H&P re Testing at Tennant Well

September 18, 2003 Komex Report "Test Pumping, Downhole Testing, And Discrete-Depth Sampling Of Tennant Well, Morgan Hill, California"

October 30, 2003 letter to RWQCB from H&P re test pumping, downhole testing, and discrete-depth sampling of the Tennant Well and need to operate.

December 22, 2003 Letter to RWQCB from H&P following up on previous unanswered letters re Tennant Well and advising further of need to operate.

April 29, 2004 Letter from Olin to RWQCB re operation of the Tennant Well.

June 2, 2004 Letter from Komex to RWQCB regarding claims made by Olin in their letter of April 29, 2004.

June 21, 2004 Olin technical response re operation of Tennant Well.

July 8, 2004 Letter to RWQCB from H&P re Tennant Well operation.

August 10, 2004 RWQCB meeting with the City re Tennant Well operation.

August 17, 2004 RWQCB letter to Olin re monitoring their systems during Tennant Well operations

August 17,2004 Letter to City from RWQCB re Tennant Well Operation.

August 23, 2004 Public Notice by City re Tennant Well back on line.

November 7. 2007 Submission by the City re Proposed CAO containing Declaration of Mr. Jim Ashcraft

November 8, 2007 Letter to RWQCB from H&P re Tennant Well request for water replacement order to be placed on agenda.

November 30, 2007 packet of information re Tennant Well provided at the request of the Chairman by City (read but subsequently improperly excluded from the record).

December 3, 2007 Response of City to 11/30 CAO Changes (subsequently improperly excluded from the record).

December 7, 2007 Testimony from Steve Tate, Mayor of the City of Morgan Hill.

December 7, 2007 Testimony from Counsel for City of Morgan Hill.

December 7, 2007 Testimony from Ed Tewes, City Manager, City of Morgan Hill.

December 7, 2007 Tennant Well pumping chart used during the testimony of Mr. Tewes.

PROOF OF SERVICE

I am over the age of eighteen years and not a party to this action. My business address is 11911 San Vicente Boulevard, Suite 350, Los Angeles, California 90049. On January 7, 2008, I served the within document(s):

PETITION FOR REVIEW

☒ by personally depositing with Overnite Express the document(s) listed above to the addresses set forth below. Following ordinary business practices, the envelope was sealed and placed for collection by Overnite Express on this date, and would, in the ordinary course of business, be retrieved by Overnite Express for overnight delivery on this date.

☒ By personally transmitting the document(s) via electronic service to the e-mail address(es) set forth below on this date before 5:00 p.m.

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I declare that I am employed in the office of a member of the bar of this court at whose direction the service was made.

Executed on January 7, 2008, at Los Angeles, California.

Ivy B. Capili